



Australian Government
The Board of Taxation

BoT.

Review of the tax treatment of digital assets and transactions in Australia

February 2024

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Foreword

The Board of Taxation (the Board) is pleased to submit this Report to the Treasurer following its review into the appropriate policy framework for the taxation of digital assets and transactions in Australia.

The Board appointed a Working Group to conduct the Review comprising Board members, officials from Treasury and the Australian Taxation Office (ATO), and specialists in taxation and digital assets across academia, the tax profession and the crypto asset industry. This Final Report is submitted to the Treasurer by Board Chair Mrs Rosheen Garnon and Board members, Dr Julianne Jaques KC, Mr Ian Kellock and Ms Andrea Laing.

In the course of the Review, the Board conducted virtual and in-person roundtable consultations with over 45 industry stakeholder groups and collected further feedback from private interviews and from virtual meetings with overseas regulators/administrators about the issues and developments in taxation as it applies to digital assets and related transactions. The Board issued a Consultation Guide and received 41 written submissions.

The Review attracted interest from domestic and foreign digital asset investors, digital asset secondary service providers (exchange, brokerage and dealing services and market operators), industry bodies, academics, tax professionals, tax software providers providing solutions for digital asset tax compliance and specialists in digital assets and blockchain.

The Board thanks all those who contributed to the consultation process and responded to the consultation paper.

The ex-officio members of the Board – the Secretary to the Treasury, Dr Steven Kennedy PSM, the Commissioner of Taxation, Mr Chris Jordan AO, and the First Parliamentary Counsel, Ms Meredith Leigh – have reserved their final views on the observations and recommendations made in this Report for advice to Government.



Rosheen Garnon
Chair of the Board



Julianne Jaques KC
Chair of the Working Group

Executive Summary

Digital (or crypto) assets and transactions are the foundation of the crypto ecosystem, which in recent years has grown exponentially in both size and complexity.

Since an anonymous proposal in 2008 for an encrypted internet payment system operating outside sovereign regulation, by 2022 it was conservatively estimated that over one million Australians held at least one cryptocurrency, and the total value of the crypto market in Australia was \$21.6 billion. The OECD has reported that by the end of 2021, the worldwide value of crypto markets had reached USD 3 trillion.

The crypto ecosystem began with the relatively simple idea of ‘bitcoin’ – units of so-called ‘cryptocurrency’ recorded on a virtual ledger, identical copies of which were distributed across independently-operated nodes around the world. However, the introduction of newer cryptocurrencies operating on different platforms, and in particular the introduction in 2015 of the Ethereum Platform with its capacity for self-fulfilling ‘smart contracts’, has seen the development of decentralised finance (DeFi) which is intended as an alternative to traditional financial services without reliance on central intermediaries or institutions such as banks or brokerages. DeFi allows cryptocurrency lending and borrowing, trading, derivatives (often taking their value from sovereign fiat currencies – so called ‘stablecoins’), insurance and risk protection, and asset management and advisory activity. New decentralised organisational structures are being established through which these activities can be conducted, and many third parties have established service businesses to assist retail investors in the crypto ecosystem, sometimes acting as custodians of crypto and other assets. More recent times have seen the development of Gaming Finance (GameFi), which combines elements of gaming and DeFi.

DeFi recorded a 50-fold increase over the year to December 2021, with the market capitalisation of stablecoins exceeding USD 150 billion by that time. The speed of growth shows no sign of abating, with the volatility of cryptocurrency prices increasing risks for retail investors and the semi-anonymous nature of crypto transactions creating challenges for regulators and law enforcement agencies.

Governments around the world are focussing on the crypto ecosystem, as are intergovernmental bodies such as the OECD, the International Monetary Fund, and the World Bank, and non-governmental international organisations such as the World Economic Forum. The Australian Government is proposing measures for Regulating Digital Asset Platforms, the Australian Law Reform Commission has released a paper covering crypto assets and Decentralised Autonomous Organisations (DAOs), the Australian Senate has completed a related Report and the Reserve Bank of Australia has trialled a Central Bank Digital Currency.

It is in this context that the Australian Government tasked the Board of Taxation with undertaking a Review of the Tax Treatment of Digital Assets and Transactions in Australia. The Board was asked to consider the characteristics and features of digital assets and transactions as well as their current tax treatment in both Australia and comparative jurisdictions, to assess awareness amongst market participants of correct taxation treatment, and to consider whether any changes to Australia’s taxation laws and/or their administration are warranted.

The Board has reached four broad conclusions:

1. The taxation of crypto assets and transactions can generally be accommodated by Australia's current taxation law.

Whilst there may be disputes as to the way in which Australia's current tax law applies to some crypto asset transactions, such disputes are not substantively different to the disputes that occur regularly in the application of taxation laws. From a practical perspective, cryptocurrencies are not money (fiat currency) and consequently transactions in crypto can (depending on the circumstances) give rise to more taxing events than transactions in money. However, specific technology-based tools can assist to calculate gains from crypto asset transactions.

2. New legislation to deal with the taxation of crypto asset transactions should not be introduced at this time.

Since the crypto ecosystem is still in its infancy, new legislation at this time would most likely lead to more complexity and potentially more uncertainty, as well as require ongoing amendment. This conclusion reflects the quickly and continually evolving nature of crypto assets and transactions, and ongoing Australian and international consideration of the crypto ecosystem.

3. At the present time, any uncertainties about how the taxation law applies to crypto assets and transactions are best managed administratively by taxpayers and the ATO working co-operatively within the current law.

To this end, the ATO should arrange a forum for regular consultative engagement on crypto asset transactions with participants from the tax profession, academia, industry, and potentially relevant government departments and/or entities such as the Treasury, ASIC and AUSTRAC. The Board has referred to this engagement as the 'Crypto Industry Working Group', but the specific arrangements would be a matter for the ATO. The Crypto Industry Working Group would be advisory only, with no formal authority.

4. In some areas, taxpayers require more comprehensive information and guidance (including examples and case studies) from the ATO upon which they can rely to ensure that their tax disclosures will be acceptable to the ATO.

Whereas for non-crypto transactions taxpayers can rely on the well understood application of the Australian taxation laws and judicial guidance to support taxation positions that they take in relation to those transactions, there is as yet minimal broad understanding of the exact nature of crypto asset transactions and how the Australian taxation laws apply to them within the context of little crypto-specific judicial guidance.

The challenge in undertaking any review of the crypto ecosystem is its quickly developing and changing nature. Many crypto transactions to which this Report refers were developed while the Review was conducted, and the Report references much data that was only released and many articles and reports that were only written during the period of the Review. Judicial consideration of legal issues (such as taxation, intellectual property, equity and trust law issues) in the crypto ecosystem is only just beginning. It is important to note that the Board's Review necessarily reflects a 'point in time' analysis of the issues.

Recognising this, the Board recommends that notwithstanding the completion of this Review, the Government should continue to monitor the taxation of crypto assets and transactions to ensure that Australia's taxation laws and systems continue to be 'fit for purpose' to deal with this new and quickly developing area.

Report at a glance

- Australia’s current taxation law can accommodate the taxation of crypto assets and transactions.
- Whilst there may be disputes as to the way in which Australia’s current tax law applies to particular crypto transactions, such disputes are not substantively different to the disputes that occur regularly in the administration of taxation laws.
- From a practical perspective, cryptocurrencies are not money and consequently transactions in crypto can (depending on the circumstances) give rise to more taxing points than transactions in money. However, specific technology-based tools can assist to calculate gains from crypto transactions.

See Recommendations:
7.1, 7.2

1.
Australia’s current tax law can apply to crypto assets.

- New legislation to deal with the taxation of crypto asset transactions should not be introduced at this time.
- Crypto assets and transactions are quickly developing and changing, and there is ongoing regulatory and international work.
- New legislation at this time would most likely lead to more complexity and therefore potentially more uncertainty.

See Recommendations:
7.5, 9.3, 9.4, 9.5, 10.3, 10.4, 13.1

2.
No new crypto-specific tax legislation at this time.

4.
Some more ATO guidance is required.

- In some areas, taxpayers require more comprehensive information and guidance (including examples).
- Whereas in non-crypto areas taxpayers can rely on judicial guidance, there is limited judicial guidance in the new and developing area of crypto.

See Recommendations:
6.1, 6.2, 6.3, 6.4, 7.1, 7.3, 7.4, 7.5, 7.6, 7.7, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 10.1, 10.2, 10.4, 11.1, 11.2, 11.3, 11.4, 13.2

3.
ATO should establish a consultation forum for crypto issues.

- Any uncertainties about how the taxation law applies to crypto assets and transactions are best managed administratively by taxpayers and the ATO working co-operatively within the current law.
- The ATO should arrange a forum for regular consultative engagement with participants from the tax profession, industry, and potentially relevant government bodies.
- This engagement is advisory with not authoritative and referred to as the ‘Crypto Industry Working Group’.

See Recommendation 6.5

Additionally, the taxation of crypto assets and transactions should continue to be monitored, using the Principles Framework as a guide.

See Recommendation 5.1

Recommendations and observations

Detailed list

The Board has made the following observations and recommendations in the Report:

Context for the Review

Observation 2.1

Crypto asset adoption continues to grow within Australia. Certainty and clarity in relation to the application of tax laws will assist to ensure that ownership of these assets does not present a risk to the Australian tax revenue base.

Digital Assets

Observation 3.1

Recognising the background to and context of the Board's review, in this Report 'digital assets' refers to assets that are now often referred to as 'crypto assets' or 'crypto'. The terms 'digital assets', 'crypto assets' and 'crypto' are used interchangeably in this Report.

Observation 3.2

The Board observes that the crypto ecosystem is complex and evolving quickly due to technological change and financial innovation, with the growth of DeFi acting as a peer-to-peer alternative to traditional finance adding further complexity and ongoing innovation. Consideration of taxation issues relating to the crypto ecosystem should be ongoing as the crypto ecosystem, and global taxation responses to it, continue to develop.

In the meantime, Australian taxpayers require clarity and certainty in relation to the application of the current tax laws so that they can ensure that their tax disclosures will be acceptable to the ATO.

Classification and nature of digital assets

Observation 4.1

Both Australian and international judicial decisions have accepted or determined that crypto assets are property at common law, notwithstanding that they may not fit easily within established property categories of things in possession or things in action.

The Board has assumed for the purposes of the remainder of this Report that crypto assets are property. If this is ultimately found to be incorrect and the Government does not then legislatively deem crypto assets to be property, the Government may need to revisit the issues in this Report.

Observation 4.2

The Government decision to legislate that cryptocurrencies such as bitcoin are not foreign currency for tax purposes provides certainty and clarity to taxpayers and is consistent with most international treatment (see Chapter 12).

Principles Framework

Observation 5.1

There was considerable support in consultations for the development of a principles framework for assessing, developing, and potentially reforming Australian taxation of digital assets and transactions.

Recommendation 5.1

The Principles Framework developed by the Board promotes certainty, simplicity, integrity as well as competitive, revenue, technological and functional neutrality. It also ensures that the tax treatment of crypto assets and transactions should be based on existing ordinary tax principles, unless there are unforeseen or unintended outcomes.

The Board recommends that the Principles Framework be used as a guide by the Government, when considering the suitability of amendments to current Australian taxation laws and/or any amendments to or creation of a new tax legislation for crypto assets and transactions.

In assessing any proposed measure by reference to the Principles Framework, all relevant factors should be considered. This may include features of the crypto ecosystem that give rise to risks and integrity concerns (see Chapter 4). For example, neutrality in principles 3, 4 and 5 needs to consider the inherent integrity risks that exist for crypto assets that do not exist for other traditional assets including cash, shares and property.

Taxpayer awareness and support

Observation 6.1

Tax advisers and tax agents perform a critical role in ensuring appropriate compliance by taxpayers with respect to crypto asset transactions. It is important that tax advisers and tax agents have the appropriate skills to advise on crypto asset transactions. Education and awareness campaigns should therefore be tailored to support both taxpayers and tax professionals.

Observation 6.2

There is a general lack of community awareness of the tax treatment of crypto assets and transactions, particularly amongst retail investors (who are often from a younger demographic with little experience of the tax system), potentially leading to poor compliance and higher administration costs.

Observation 6.3

Crypto asset users are engaging through a variety of platforms and there is an opportunity for these platforms to be used to share crypto asset tax guidance.

Recommendation 6.1

The Board notes that since its initial consultation, the ATO has increased the content available through its 'Crypto asset investments' landing page and has recently updated its website. In December 2023 the ATO launched a new ato.gov.au content split into the three main taxpayer audience groups. The Board commends the ATO for its work in this regard.

To ensure that users have access to all available information (including carrying on a crypto asset business and superannuation matters), the Board recommends that the ATO publish an index to all crypto asset related content on ato.gov.au, linking to the relevant guidance, similar to that utilised by the UK HMRC.

Recommendation 6.2

The Board understands that the ATO's new website Information Architecture should prevent duplication of content across the site with linkages where required.

The Board recommends that if similar guidance is still provided across different pages on the ATO website:

- a statement identifying the target audience of the page, for example, that the page has been developed to support taxpayers that do not have English as a first language
- links are provided to other guidance on the same topic included on other pages on the website.

Recommendation 6.3

The Board recommends that where new and novel transactions or assets are being addressed through ATO web guidance, to the extent possible and without jeopardising the language appropriate to the particular targeted audience, the ATO detail the legislative or common law precedents that have been relied upon to arrive at the ATO's position. This is particularly relevant in the crypto asset space, where limited precedential interpretations are available to taxpayers.

Recommendation 6.4

UK HMRC guidance provides a published history of all updates made to their crypto guidance, so enabling users to identify guidance that may have changed and therefore positions that may require reconsideration, to understand how the guidance may have changed over time, and to support substantiation of any positions taken should they be subject to an inquiry or review.

The Board recommends that the ATO develop a similar capacity for taxpayers to be able to access earlier versions of the guidance and identify changes made, for the same reasons.

Recommendation 6.5

In view of the constantly and quickly changing and developing nature of the crypto ecosystem, the Board recommends the ATO establish regular consultative engagement on crypto with participants from the tax profession, industry, and potentially relevant government departments and/or entities. The Board has referred to this engagement as the 'Crypto Industry Working Group', but the specific arrangements would be a matter for the ATO. The Crypto Industry Working Group would be advisory only, with no formal authority.

Income tax: General principles

Recommendation 7.1

Established common law principles can apply to crypto assets to determine whether profits or gains are on revenue or capital account. However, there is currently a lack of judicial precedent specifically dealing with crypto transactions. This includes, significantly, the circumstances in which crypto activities will amount to carrying on a business, including a business of trading. Taxpayers therefore need access to information and guidance upon which they can rely to ensure their tax disclosures will be acceptable to the ATO.

Accordingly, the Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop further and detailed guidance with examples/case studies in relation to how the ATO will apply the established indicia for carrying on a business to crypto asset activities.

Observation 7.1

There is a risk that a user of the ATO website may conclude that the appropriate tax treatment for crypto asset transactions is either:

- under the capital gains tax provisions
- as trading stock in carrying on a business.

With the exception of the minor reference in TD 2014/26, the ATO does not provide guidance in relation to the taxation implications of crypto asset transactions occurring as part of an isolated profit-making

undertaking or where the profit/loss on disposals of crypto assets may be on revenue account to a business even if those assets are not held as trading stock.

Recommendation 7.2

The Board has observed (Observation 7.1) that with the exception of the minor reference in TD 2014/26, the ATO does not provide guidance in relation to the taxation implications of crypto asset transactions occurring as part of an isolated profit-making undertaking or whether the profit/loss on disposals of crypto assets may be on revenue account even if those assets are not held as trading stock.

In relation to these issues, taxpayers require access to information and guidance upon which they can rely to ensure their tax disclosures will be acceptable to the ATO.

Accordingly, the Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop guidance in relation to the application to crypto asset transactions of the principles established regarding isolated transactions entered into with a commercial or profit-making intention and where the profit/loss on disposal of crypto assets may be on revenue account to a business even if those assets are not held as trading stock.

Observation 7.2

Clarity in relation to the valuation of crypto assets given in respect of acquiring a capital asset (including another crypto asset) or received in respect of the disposal of a capital asset (including another crypto asset) is necessary to establish cost base and capital proceeds.

Recommendation 7.3

Establishing the cost of cryptocurrencies for CGT purposes can be difficult in practice, when large quantities of effectively fungible assets are acquired and sold in different parcels. Different potential methodologies include First in First Out (FIFO), Last in First Out (LIFO), Highest in First Out (HIFO) and averaging.

The Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, establish and publish a position (binding, if practicable) in relation to practical costing solutions for crypto assets that would be acceptable to the ATO.

Recommendation 7.4

ATO website guidance states that in rare circumstances an NFT can be held as a personal use asset and so be eligible for CGT concessions. There are also edited private binding rulings on the ATO website dealing with specific examples where the ATO has agreed or disagreed that the NFT in question is held as a personal use asset.

There is an increasing and varied use of NFTs, including within the GameFi space, and the circumstances in which an NFT can be held as a personal use asset may be increasing. Taxpayers therefore need access to information and guidance in relation to NFTs and personal use assets upon which they can rely to ensure their tax disclosures will be acceptable to the ATO.

The Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop further guidance with examples as to when the CGT personal use asset rules apply to NFTs.

Recommendation 7.5

The Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop guidance regarding the manner in which common crypto asset transactions may be treated under the TOFA rules.

Observation 7.3

The Board observes that crypto asset users may incur expenditure in undertaking their activities. This expenditure may be deductible to a taxpayer in accordance with the existing law under section 8-1 of the ITAA 1997.

Observation 7.4

Whether the legislation should be amended to quarantine revenue losses from crypto assets and transactions is a policy issue for the Government.

Recommendation 7.6

Many crypto asset users and their advisers consider that there can be practical difficulties in establishing the source of gains from crypto asset transactions under general principles.

The Board recommends that the ATO in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group develop guidance in relation to the source of ordinary income from crypto asset transactions, upon which taxpayers can rely to ensure that their tax disclosures will be acceptable to the ATO.

The Board also recommends that the ATO monitor developments including international developments in relation to the issue of the source of income from crypto asset transactions, including positions taken by offshore authorities including for example the US IRS and the US Securities and Exchange Commission.

Recommendation 7.7

There are many circumstances in which it is necessary for a crypto asset user to determine the value of a crypto asset for the purposes of complying with the tax law.

The Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop valuation guidance that is specific to crypto assets. Where appropriate, the ATO may wish to consider providing valuation guidance to allow averaging or other ‘short-cut’ methodologies to reduce compliance costs associated with the particular characteristics of crypto asset transactions.

Income tax: Specific taxation regimes

Observation 8.1

Whether the legislation should be changed to permit a managed investment trust to engage in crypto asset transactions, and whether crypto asset transactions should be covered by the capital election, is a policy issue for the Australian Government.

Observation 8.2

SMSF trustees are currently facing challenges in complying with their obligations under the *Superannuation Industry (Supervision) Act 1993* and associated regulations.

Superannuation trustees who choose to engage in crypto asset transactions face similar income taxation issues as those faced by other taxpayers who choose to engage in crypto asset transactions. In addition, they must comply with applicable regulatory requirements.

It was put to the Board that crypto assets should be taxed to superannuation funds in the same way as shares, units in unit trusts and land for superannuation funds – that is, under the CGT provisions. It is the Board’s view that that adding a further exception to the treatment of superannuation fund held trading stock is not compelling.

Observation 8.3

Various reforms in the area of charities and not-for-profit entities in relation to digital assets were suggested to the Board. It is the Board’s view that there are broader considerations involved than just taxation affecting charities and not-for-profit entities and as such these are matters of policy for the Australian Government to consider.

Observation 8.4

Donations of crypto will be treated as donations of other forms of property, which gives rise to the same valuation issues for crypto as in other income tax contexts. However, there is an added complexity for donations of property held for more than 12 months and valued at more than \$5,000, as the value must be determined by the Commissioner.

As this issue can be avoided by a taxpayer simply liquidating the crypto asset prior to donation, it is not apparent to the Board that any measure (whether legislative or administrative) is required to deal with this issue.

Observation 8.5

The receipt, holding and distribution of crypto assets raise particular issues, including integrity and risk issues, for not-for-profit entities which may often be under-resourced and operated by volunteers without the expertise to deal in crypto assets.

Holdings in crypto assets may also impact compliance obligations of public and private ancillary funds.

The interaction of crypto assets and transactions with the not-for-profit sector is an area that the Government may like to consider in the future.

Income Tax: Specific digital asset transactions

Recommendation 9.1

The ATO's guidance to cryptocurrency miners predominantly concludes that they receive and hold cryptocurrency as trading stock. This does not appear to deal with the situation where cryptocurrency miners intend to hold the cryptocurrency that they receive, rather than sell it. The ATO's guidance also does not appear to deal with the component of the mining reward attributable to transaction fees, rather than newly-minted cryptocurrency.

The Board recommends that the ATO in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group develop comprehensive guidance as to the tax consequences for cryptocurrency mining activities upon which taxpayers who engage in mining can rely to ensure that their tax disclosures will be acceptable to the ATO.

Recommendation 9.2

The ATO's guidance to cryptocurrency stakers/validators concludes that the cryptocurrency rewards from staking are received as income on revenue account (being a return on their 'stake'), with the amount assessed equivalent to the value of the cryptocurrency received.

This treatment is different to the treatment of mining rewards, due to the different manner in which staking and mining activities are undertaken.

The Board recommends that the ATO in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group develop comprehensive guidance as to the tax consequences for cryptocurrency staking/validating activities upon which taxpayers who engage in staking/validating can rely to ensure that their tax disclosures will be acceptable to the ATO.

Recommendation 9.3

The Board does not recommend any legislative change to deal with airdrops, but recommends that the ATO in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group develop further guidance that deals with airdrops in different circumstances, upon which taxpayers can rely to ensure that their tax disclosures will be acceptable to the ATO.

Recommendation 9.4

The Board considers that there is significant complexity for users in identifying potential changes in legal and beneficial ownership where wrapping and bridging occurs.

At this stage, the Board does not recommend any immediate legislative changes with respect to wrapping and bridging transactions. However, the Board recommends that the ATO provide more detailed guidance, upon which taxpayers can rely to ensure that their taxation disclosures will be acceptable to the ATO, in relation to wrapping and bridging, with particular reference to the specific characteristics that would be identifiable by a taxpayer to determine whether or not a taxing event has occurred.

Recommendation 9.5

In light of the complexity and the quickly and continually evolving nature of crypto asset transactions and DeFi in particular, the Board recommends that, at this time, there be no new legislation to establish a new and prescriptive taxation regime to deal with crypto and in particular DeFi transactions (including bridging and wrapping). The Board considers that new legislation at this time would lead to more complexity, potentially more uncertainty, and would put in place a regime that may require continual amendment as the crypto ecosystem develops.

As noted in Recommendation 9.4, the Board recommends that the ATO provide more detailed guidance, upon which taxpayers can rely to ensure that their taxation disclosures will be acceptable to the ATO, in relation to wrapping and bridging. Acknowledging that the Board has heard a number of concerns as to the manner in which the current taxation rules operate, once that guidance is provided, the Board recommends that this issue is reviewed further to confirm that the rules are operating appropriately.

Recommendation 9.6

The ATO's guidance in relation to chain splits/hard forks do not consider a number of matters including the potential application of section 112-25 of the ITAA 1997, any difference in treatment between chain splits/hard forks and soft forks, or the consequences of a chain split where the taxpayer holds the tokens on revenue account.

The Board recommends that the ATO consider these matters and issue further guidance in relation to the treatment of forks on which taxpayers can rely to ensure their tax disclosures will be acceptable to the ATO.

Goods and services tax

Recommendation 10.1

The July 2023 update to ATO web guidance confirming the GST treatment of a stablecoin as a derivative is welcome however stakeholder feedback is that greater certainty is needed. The Board recommends that the position is confirmed through an update to GSTR 2002/2 or other binding guidance.

Recommendation 10.2

NFTs comprise a broad and diverse group of assets and rights that cannot always be linked to an underlying asset, or that may have royalty-style payments embedded into them. These features create complexity and uncertainty for taxpayers as to their GST responsibilities. It is therefore recommended that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop further public guidance to clarify how common types of NFTs (such as artworks, tickets etc) and the associated transactions should be treated for GST purposes.

Recommendation 10.3

Subsequent to Recommendation 10.2 it is recommended that further investigation and work be undertaken as to whether further clarification regarding the treatment of NFTs is needed and if so, how these assets should be categorised for GST purposes.

If clarity and certainty regarding the treatment of NFTs cannot be achieved through further guidance and/or administrative solutions, the Government could consider legislative change if it considers this appropriate, but the Board does not recommend any legislative change at this stage. For further, see Chapter 13 of this Report.

Recommendation 10.4

The Board has received feedback that taxpayers are not able to currently comply with their obligations under the GST law. The Board considers that a more correct reflection is that taxpayers may not be able to prove that certain supplies are not connected with Australia in order to be GST-free under the law. In such

cases, the Board considers the treatment should administratively default to either input-taxed or taxable (depending on the applicable circumstances). If this administrative default applies, the Board considers that taxpayers are able to comply with their obligations under the GST law.

The Board recommends that the ATO consider this matter and in particular the correct outcome if taxpayers cannot prove that supplies are GST-free. If the ATO agrees with the Board's view in relation to the application of an administrative default treatment, the Board recommends that the ATO issue guidance that reflects this outcome.

If this issue is still unresolved after further consideration, the Government could consider legislative change if appropriate, but the Board does not recommend any legislative change at this stage. For further information, see Chapter 13 of this Report.

Record keeping and tax compliance

Recommendation 11.1

The Board observes that until there is widespread, consistent, and timely implementation of an international standard for crypto-asset reporting, taxpayers will be faced with ongoing challenges in obtaining information in relation to their crypto asset holdings, which may include information relating to required tax disclosures.

It is important that taxpayers understand these issues and the actions that can be taken to minimise the associated risks, both for making tax disclosures and retaining sufficient supporting records. This is particularly relevant for demonstrating to the ATO that reasonable care has been taken in arriving at tax positions, which can be relevant to the level of tax penalties that may arise on resulting tax shortfalls.

Whilst acknowledging this taxpayer responsibility, the Board also acknowledges the difficulties faced by taxpayers in light of the information challenges in the new and developing crypto ecosystem.

Accordingly, the Board recommends that the ATO consider whether it is possible to, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop guidance for taxpayers that rely upon data from crypto exchanges to determine their tax positions, as to how they might comply with appropriate record keeping requirements including for the purposes of, for example, demonstrating that the taxpayer has acted with reasonable care.

Recommendation 11.2

It is important that taxpayers understand the limitations in any software tools that they are using to substantiate their tax positions, and the associated impact on their meeting their tax obligations. The Board recognises that ultimately, it is the responsibility of taxpayers to comply with the taxation obligations that arise from their activities.

Whilst acknowledging this taxpayer responsibility, the Board also acknowledges the difficulties faced by taxpayers in light of the information challenges in the new and developing crypto ecosystem.

Accordingly, the Board recommends that the ATO consider whether there are any steps that it can take, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group (and including representatives of crypto asset tax software providers), to provide guidance to assist in improving the useability, coverage and outputs associated with crypto tax software.

Recommendation 11.3

The Board recommends that the ATO consult with industry stakeholders and taxpayer representative groups, the Crypto Industry Working Group and crypto exchanges to identify and implement improvements to the data matching of exchange data, with particular reference to identifying information used for data matching.

Recommendation 11.4

The Board recommends that consideration be given to including a specific crypto asset investment or transaction related disclosure be added to the individual income tax return, to support compliance and provide a prompt for tax agents and taxpayers to include crypto asset related disclosures in their returns.

Observation 11.1

Many taxpayers are seeking to 'do the right thing' when completing their income tax returns, however due to the evolving ecosystem and limited guidance may make errors in disclosures. These taxpayers may benefit from further education as an alternative to penalties at this stage of the development of the crypto ecosystem, whilst recognising that a balance must be struck with the personal responsibility of taxpayers to ensure that they meet their taxation obligations in relation to activities in which they engage.

International taxation of digital assets

Observation 12.1

The Board observes that the various themes from the above comparative analysis is directed at educating, assisting and providing simpler and easier compliance for the user of crypto assets and transactions.

The Board notes that some countries have introduced tax regimes and concessions for crypto assets and transactions.

Looking to the future

Recommendation 13.1

Some options for crypto-specific legislative taxation regimes were raised with the Board during consultations.

The Board does not recommend the introduction of any crypto-specific legislative taxation regime at the present time, when the crypto ecosystem is changing and developing rapidly. Even if the crypto ecosystem was more settled, a crypto-specific legislative taxation regime could raise issues such as ensuring confined and applicable definitions, acting contrary to neutrality, potential integrity concerns, increased complexity and barriers to entry for a developing market.

Should the Government decide to explore the suitability of introducing a crypto-specific legislative taxation regime at some time in the future, the Government may decide to consider one or more of the options identified in this Chapter 13, which were the subject of varying levels of discussion during the Review.

Should the Government decide to consider any of these options in the future, the Board recommends that the Government undertake further consultation with key stakeholders and a further detailed review in relation to any option that it might consider.

Recommendation 13.2

The Board's stakeholder consultations together with its own research indicates that areas in the crypto ecosystem that are currently increasing in scale and developing at a particularly fast rate are DAOs, DeFi, GameFi, and NFTs.

The Government may like to consider undertaking further work in relation to the taxation implications of these four areas in the future particularly in light of any policy responses made to the regulation of such activities.

In the meantime, the Board recommends that the ATO continue to consider the tax treatment of new and evolving crypto assets and transactions in accordance with existing rules and principles, including in relation to these four areas.

Context of observations and recommendations

As can be seen from the above, the Board has made a number of recommendations based on taxpayers' need for information and guidance in relation to crypto assets and transactions upon which they can rely, to ensure that their taxation disclosures will be acceptable to the ATO. The Board acknowledges, however, that its recommendations are made in the context of its terms of reference which are concerned only with crypto assets and transactions, whereas the ATO must consider any implementation of those recommendations in the context of its responsibilities to administer the broader tax system, which can involve different and competing priorities.

Glossary

The following terms used throughout the Report take on the following meaning in this document.

Term	Meaning in this document
Blockchain	A particular type of distributed ledger technology that uses cryptographic and algorithmic methods to create and verify a continuously growing, append-only data structure that takes the form of a chain of so-called ‘transaction blocks’ – the blockchain – which serves the function of a ledger. ¹
Central Bank digital currency (CBDC)	A form of money, denominated in a national currency, that would be issued as a direct liability of the central bank. ² A CBDC could be based on a centralised ledger or alternatively Distributed Ledger Technology.
Crypto asset	Assets that are backed by a distributed ledger and use cryptography. In this report, used interchangeably with ‘digital assets’.
Cryptocurrency	A subset of digital currencies that rely on cryptographic techniques to achieve consensus. ³
Cryptography	A science at the intersection of mathematics, probability, electrical engineering, computer science, and others that is concerned with the transformation of information for one or more of the following purposes: (i) data confidentiality; (ii) data integrity; (iii) authentication; and (iv) non-repudiation. ⁴
Decentralised Autonomous Organisations (DAOs)	A type of organisational structure involving multiple participants online, that might rely on blockchain system, smart contracts, or other software-based systems. ⁵
Decentralised finance (DeFi)	The crypto assets, financial smart contracts, software/protocols and decentralised applications used to decentralise and automate financial transactions. ⁶

1 Krause, Solvej Karla; Natarajan, Harish; Gradstein, Helen Luskin, *Distributed Ledger Technology (DLT) and blockchain (English)*, FinTech note no. 1 (2017), Washington, D.C, World Bank Group, 3 (*‘DLT and blockchain’*).

2 Reserve Bank of Australia (RBA), *Australian CBDC Pilot for Digital Finance Innovation* (Report, 23 August 2023) 3 (*‘Australian CBDC Pilot for Digital Finance Innovation’*).

3 World Bank, *DLT and Blockchain* (n 1) 3.

4 The Australian Government the Treasury, *Token Mapping* (Consultation Paper, February 2023) 54 (*‘Token Mapping Consultation Paper’*).

5 *‘Decentralised Autonomous Organisations (DAOs) Current Project status’*, [UK] Law Commission (Web Page, accessed December 2023).

6 OECD, *Taxing Virtual Currencies: An Overview of Tax Treatments and Emerging Tax Policy Issues*, OECD, Paris (October 2020) 49 (*‘Taxing Virtual Currencies’*).

Term	Meaning in this document
Digital currency	Digital representations of value that are denominated in their own unit of account, distinct from e-money which is simply a digital payment mechanism representing and denominated in fiat money. ⁷ Digital currency is also specifically defined for the purposes of the <i>A New Tax System (Goods and Services Tax) Act 1999</i> .
Digital assets	Traditionally any asset that is represented digitally or electronically ⁸ but now primarily focussed on assets that are backed by a distributed ledger and involve cryptography (that is, crypto assets). ⁹ In this Report, 'digital assets' is used interchangeably with 'crypto assets'.
Digital asset platform	A multi-function platform comprised of a facility for holding digital assets and assets backing digital assets with additional administrative and transactional functions. ¹⁰ Broadly this term covers all business models that have a base of custody underlying them (market operator style, broker style, merchant etc.).
Distributed ledger technology (DLT)	An approach to recording and sharing data across multiple data stores (ledgers). This technology allows for transactions and data to be recorded, shared, and synchronized across a distributed network of different network participants. ¹¹
Nodes	Network participants in a distributed ledger network (e.g. a computer or phone).
Non-fungible tokens (NFTs)	Encrypted representations of unique data. Each token is mathematically unique and unable to be fractionalised, unlike many fungible crypto assets. NFTs are commonly thought of as representing artwork ownership, however uses are wide ranging.
Smart contract	DLT-based software code that carries out, controls, and documents relevant events and actions according to predefined requirements and rules. ¹²

7 World Bank, *DLT and Blockchain* (n 1) 3.

8 UK Law Commission, *Digital Assets: Final report* (27 June 2023) ix ('*Digital Assets: Final report*').

9 '[All about digital assets & how to create digital assets marketplace with Nasdaq's Marketplace Services Platform](#)', Nasdaq (Web Page, accessed 21 January 2024); Senate Select Committee, Parliament of Australia, *Australia as a Technology and Financial Centre* (Report, October 2021) [2.4]—[2.5] ('*Senate Select Committee Report*').

10 The Australian Government the Treasury, *Regulating Digital Asset Platforms* (Proposal Paper, October 2023) 56 ('*Regulating Digital Asset Platforms*').

11 World Bank, *DLT and Blockchain* (n 1) 1.

12 Wharton Blockchain and Digital Asset Project, *DeFi Beyond the Hype – the Emerging World of Decentralized Finance* (Report, May 2021) 3 ('*DeFi Beyond the Hype*').

Term	Meaning in this document
Stablecoin	Crypto assets that aim to maintain a stable value relative to a specified asset, or a pool or a basket of assets. ¹³
Token	A unit of digital information that can be exclusively used or controlled by a person despite that person not controlling the host hardware where that token is recorded. The crypto token is recorded on a distributed ledger and the authenticity of the crypto token is established by cryptography. ¹⁴

13 Financial Stability Board, *Addressing the regulatory, supervisory and oversight challenges raised by “global stablecoin” arrangements* (Consultative document, 14 April 2020) 4.

14 The Treasury, *Token Mapping Consultation Paper* (n 4) 13 [33]—[34].

List of Abbreviations

The following abbreviations and acronyms are used throughout this Report.

Abbreviation	Definition
ASIC	Australian Securities and Investments Commission
AUSTRAC	Australian Transaction Reports and Analysis Centre
ATO	Australian Taxation Office
Board	Board of Taxation
CARF	Crypto-Asset Reporting Framework
CBDC	Central Bank Digital Currency
CGT	Capital gains tax
CRA	Canada Revenue Agency
Commissioner	The Commissioner of Taxation
DAO	Decentralised Autonomous Organisation
DEX	Decentralised Exchange
DeFi	Decentralised Finance
DGR	Deductible gift recipient
DLT	Distributed ledger technology
FBT	Fringe benefits tax
GameFi	Gaming Finance
GST	Goods and services tax
GST Act	<i>A New Tax System (Good and Services Tax) Act 1999</i>
UK HMRC	HM Revenue and Customs (United Kingdom)
IOSCO	International Organization of Securities Commissions
IRAS	Inland Revenue Authority of Singapore
US IRS	Internal Revenue Service (United States)
ITAA 1936	<i>Income Tax Assessment Act 1936</i>
ITAA 1997	<i>Income Tax Assessment Act 1997</i>
NFT	Non fungible token
NZ	New Zealand
NZ IR	Inland Revenue (New Zealand)
OTC	Over the counter

Abbreviation	Definition
PBR	Private Binding Ruling
Review	The Board of Taxation Review of the Tax Treatment of Digital Assets and Transactions in Australia
SMSF	Self-managed superannuation fund
TAA 1953	<i>Taxation Administration Act 1953</i>
TASA 2009	<i>Tax Agent Services Act 2009</i>
TASR 2022	<i>Tax Agent Services Regulations 2022</i>
TOFA	Taxation of financial arrangements
TPB	Tax Practitioners Board
UK	United Kingdom
US	United States
USD	United States dollar

Chapter 1: Introduction

Background

On 8 December 2021, the former treasurer announced the government would task the Board with undertaking a review into the appropriate policy framework for the taxation of digital assets and transactions in Australia (the **Review**), as part of a broader response to a review of Australia's payments system and the regulation of digital assets.

On 20 March 2022, the former government released the Terms of Reference for the Review. The Terms of Reference were subsequently confirmed by the Government on 12 August 2022, following the 2022 federal election.

Terms of Reference

With reference to Australia's strong competitive position as an early adopter of digital innovations relative to other jurisdictions, the scope of digital assets and transactions, and without increasing the overall tax burden, the Board is asked to:

- Consider the current Australian taxation treatment of digital assets and transactions and emerging tax policy issues.
- Consider the awareness of the taxation treatment by both retail and wholesale investors and those transacting in digital assets as part of their business.
- Consider the characteristics and features of digital assets and transactions in the market, including the rapid evolution of technology supporting the broader digital asset ecosystem.
- Analyse the taxation of digital assets and transactions in comparative jurisdictions and consider how international experience may inform the taxation of digital assets and transactions in Australia.
- Consider whether or not any changes to Australia's taxation laws and/or their administration are warranted in the context of digital assets and transactions, both for retail and wholesale investors.

Consultation

The Government requested that the Board should, in carrying out the terms of reference, consult with taxpayers, tax representative bodies, industry stakeholders and academics.

Timing

The Board was originally asked to report back to the Government by 31 December 2022. During the Review, extensions were provided to 30 September 2023 and then to 29 February 2024.

The Review Team

The Board appointed a Working Group to conduct the Review. The Working Group included at various times Board Members Mr Anthony Klein (to the end of his term), Ms Tanya Titman, Ms Andrea Laing, Dr Julianne Jaques KC and Mr Ian Kellock as well as Board Chair Mrs Rosheen Garnon. In addition, the Working Group comprised specialists in taxation and digital assets across academia, the tax profession and digital asset industry (see **Appendix A**), and officials from The Treasury and the ATO.

Consultation Process

The Board's consultation process involved:

- Publication of a Consultation Guide on 18 August 2022 describing the scope of the Review and posing a series of questions to help identify the key issues in the tax treatment of crypto assets and related transactions.
- Nine virtual and in person consultation sessions, represented by over 45 stakeholder groups.
- Virtual meetings with international regulators/administrators from Canada, New Zealand (NZ), United Kingdom (UK) and the United States (US) about issues and developments in the tax administration of crypto assets and related transactions.
- An extensive literature, tax policy and tax issues review about the tax treatment of crypto assets and related transactions.

Submissions

The Board received 41 written submissions, including two confidential submissions, from a range of stakeholders in response to the Consultation Guide.

Additionally, the Board received written responses to targeted consultation questions from international regulators/administrators from Canada, NZ, Singapore, UK and US.

The Board recognises these significant contributions to the Review, and thanks all of those who contributed. The Board carefully considered all submissions and other contributions made during the Review. Further details of the consultation process and submissions are available at **Appendix A**.

Structure of this Report

This Report may be broadly divided into two parts: Chapters 1 to 4 contain introductory, background and explanatory material, and Chapters 5 to 13 set out the substantive considerations and outcomes of the Board's Review.

Following this Chapter 1 introduction:

- Chapter 2 provides the context of the Board's Review including an overview of previous and concurrent work by Australian Government departments and agencies in relation to digital assets.
- Chapter 3 provides an explanation of digital assets and the crypto ecosystem including Distributed Ledger Technology, Blockchain and Decentralised Finance (DeFi).
- Chapter 4 sets out different ways in which digital assets have been and might be classified, including discussions of digital assets as property and foreign currency.

The Board has developed a framework of principles upon which its consideration of the appropriate taxation treatment of digital assets has been based, and this is contained in Chapter 5. Following this framework:

- Chapter 6 deals with taxpayer awareness of the correct taxation treatment of digital assets, together with the support currently provided to taxpayers to assist their awareness.
- Chapter 7 sets out income tax issues (including the existing framework, the ATO's position and the Board's conclusions).
- Chapter 8 considers the application to digital assets and transactions of specific taxation regimes within Australia's taxation legislation that exist to deal with particular taxpayers or transactions.
- Chapter 9 maps the lifecycle of cryptocurrencies (relying on the background information contained in Chapter 3) and considers the taxation issues relating to particular stages in this lifecycle.
- Chapter 10 sets out Goods and services tax (GST) issues.
- Chapter 11 deals with record keeping and tax compliance.
- Chapter 12 contains the Board's analysis of the taxation of digital assets and transactions in comparative jurisdictions.
- Chapter 13 identifies specific tax policy issues that the Australian Government could consider in the future should a crypto-specific taxation regime be contemplated, and also outlines some specific crypto areas that are developing and increasing in scale at a particularly fast rate and so should be included in ongoing monitoring of taxation in the crypto ecosystem.

Chapter 2: Context of the Review

Key Points

- The Board's Review was commenced and conducted in the context of various pieces of work in relation to digital assets being undertaken across government together with the growth in the prevalence of digital asset holdings in Australia.
- Conservatively, crypto assets are held by over 1 million Australians with total value estimated to be over \$20 billion in 2022.
- Crypto asset adoption continues to grow within Australia and certainty and clarity in relation to tax laws will assist in ensuring that ownership of these assets does not present a risk to the Australian tax revenue base.

Introduction

This chapter sets out the context of the Review and in particular relevant work that has been and is being undertaken across the Australian Government in relation to digital assets. This chapter also highlights the prevalence of crypto asset holdings in Australia and issues with determining the size of the market.

Background to the Review

The Review was announced on 8 December 2021 as part of the former government's response to three earlier reviews that had been completed during 2021: the Review of the Australian Payment System;¹⁵ the Mobile Payment and Digital Wallet Financial Services Review;¹⁶ and the Senate Select Committee on Australia as a Technology and Financial Centre Review (Senate Select Committee Review).¹⁷

15 The Australian Government the Treasury, *Payment Systems Review* (Report, June 2021).

16 Parliamentary Joint Committee on Corporations and Financial Services, Parliament of Australia, *Mobile Payment and Digital Wallet Financial Services* (Report, October 2021).

17 *Senate Select Committee Report* (n 9).

Review of the Australian Payments System

On 21 October 2020, the former treasurer announced a review into the Australian payments system, led by Mr Scott Farrell. The Review was asked to investigate whether the regulatory architecture of the Australian payments system remains fit-for-purpose and responsive to advances in payments technology and changes in consumer demand. This included investigating whether the regulatory framework adequately accommodates new and innovative services and its effectiveness in facilitating the implementation of government policy.

The Final Report for the review was published in June 2021, identifying the need for enhanced payments leadership, aligned payments regulation and simplified payments licensing.

Mobile Payment and Digital Wallet Financial Services Review

On 21 March 2021, the Parliamentary Joint Committee on Corporations and Financial Services began a self-referred inquiry into mobile payment and digital wallet financial services. The Review covered areas including the nature of commercial relationships and business models, differences in commercial relationships in Australia and other jurisdictions and the implications for competition and consumer protection.

The final report was published in October 2021.

The Senate Select Committee on Australia as a Technology and Financial Centre Final Report

On 20 October 2021, the Senate Select Committee Review released a report (*Senate Select Committee Report*) which focussed on key areas affecting the competitiveness of Australia's technology, finance and digital asset industries, including the regulatory future of cryptocurrencies and digital assets.

The report discussed the concerns and issues relating to the way in which cryptocurrencies and other digital assets are treated for tax purposes in Australia. The report highlighted various submissions made to the Senate Select Committee, including that:

Australia's current taxation regulations and guidance relating to cryptocurrencies and other digital assets need updating in order to keep pace with the rapid evolution of technology...

A number of stakeholders expressed concern about a lack of clear guidance from the ATO about the application of existing principles in the tax law to new and emerging technologies.¹⁸

The report noted the view of the Committee that 'Taxation rules for digital assets require further clarification. In particular, the rules around CGT for cryptocurrency and digital assets need to be updated to ensure that new types of technology structures are appropriately accounted for, and digital asset

18 *Senate Select Committee Report* (n 9) 139.

transactions only create a CGT event when they genuinely result in a clearly definable capital gain or loss.¹⁹ The Committee recommended that the 'CGT regime be amended so that digital asset transactions only create a CGT event when they genuinely result in a clearly definable capital gain or loss', but expressed concern that the removal of CGT taxation points altogether for crypto-to-crypto transactions so that CGT is only applied at the 'on and off ramp' points where digital assets are traded for fiat currency or similar, would simplify the CGT rules for digital assets but may risk leakage of tax revenue.²⁰

Former Australian government's response to the three earlier Reviews

On 8 December 2021, the former Australian government released its response to the three reports.²¹ The full response was contained in 'Transforming Australia's Payments System', in which it was stated that 'To provide clarity to holders of crypto-assets, the Board of Taxation will review an appropriate policy framework for the taxation of digital transactions and assets'.²²

The Terms of Reference for the Board's review was released on 21 March 2022 and following the 2022 federal election were confirmed by the Government on 12 August 2022.

The former Australian government's response of 8 December 2021 also indicated that it would undertake consultation on the establishment of a licencing framework and a custody or depository regime for crypto assets, and that The Treasury, with the support of financial regulators and in consultation with industry, would conduct a token mapping exercise to identify relevant characteristics of digital assets.²³

Concurrent Reviews

The Board has highlighted a number of international reviews in relation to crypto assets and transactions being undertaken globally throughout the Report. Notable work includes that of the Organisation for Economic Co-operation and Development (OECD). In June 2023, the OECD published its final report on a model Crypto-Asset Reporting Framework (CARF) which provides a framework for automatic exchange of tax-relevant information on crypto assets in a standardised manner.²⁴ The CARF sets out the relevant crypto assets in scope and the intermediaries and other service providers that will be subject to reporting.

19 *Senate Select Committee Report* (n 9) x.

20 *Senate Select Committee Report* (n 9) 140.

21 Treasurer, 'Reforming Australia's payments system for the digital age' (Media Release, 8 December 2021).

22 Australian Government the Treasury, *Transforming Australia's Payments System* (Government response, December 2021) 5 ('*Transforming Australia's Payments System*').

23 The Treasury, *Transforming Australia's Payments System* (n 22) 12.

24 OECD (2023), *International Standards for Automatic Exchange of Information in Tax Matters: Crypto-Asset Reporting Framework and 2023 update to the Common Reporting Standard*, OECD Publishing, Paris.

On 10 November 2023 the OECD announced that 48 countries and jurisdictions (including Australia) intend to implement the CARF by 2027.²⁵

This followed on from the OECD's earlier work in crypto assets, which included publishing a paper on 12 October 2020 titled 'Taxing Virtual Currencies: An Overview of Tax Treatments and Emerging Tax Policy Issues'.²⁶ Also relevant is the 'OECD Inclusive Framework' on Base Erosion and Profit Shifting (BEPS): on 19 July 2013, the OECD issued its BEPS Action Plan which identified 15 actions dealing with international tax avoidance. Action 1 dealt with digitalisation of the economy but has developed to extend beyond digitalisation and into two 'pillars' – Pillar One deals with nexus and profit allocation and Pillar Two deals with ensuring a minimum level of taxation. Pillar Two's Global Anti-Base Erosion (GloBE) rules and a Domestic Minimum Tax are currently in the process of being implemented in Australia. Both Pillar One and Pillar Two may affect measures the Government may like to consider in relation to Digital Assets and Transactions.²⁷

The Board also notes the following Australian reviews and reports that have progressed at the same time as the Board's Review.

The Treasury – Token Mapping

On 22 August 2022, the Treasurer, the Assistant Treasurer and the Assistant Minister for Competition, Charities and Treasury announced that as a first step in a reform agenda, Treasury would prioritise 'token mapping', being 'the process of identifying the key activities and functions of products in the crypto ecosystem and mapping them against existing regulatory frameworks'.²⁸ This is considered to be a foundational step to regulating the crypto ecosystem.²⁹

On 3 February 2023, Treasury released its consultation paper 'Token Mapping'. The consultation paper aimed to 'explain key concepts in simple terms for a broad audience',³⁰ to describe how the existing financial services framework applies to a large part of the crypto ecosystem, and to describe how some elements of the crypto ecosystem challenge the assumptions underlying existing Australian regulatory frameworks.³¹

Token mapping should assist to identify:

- the elements of the crypto ecosystem that fall inside and outside the existing regulatory perimeters
- the key risks that are added or removed by products using crypto networks
- the sensible regulatory targets for a future regulatory framework

25 OECD, '[OECD Secretary-General Mathias Cormann welcomes pledge by 48 countries to implement global tax transparency standard for crypto-assets by 2027](#)' (Media Release, 10 November 2023).

26 OECD, '[Taxing Virtual Currencies: An Overview of Tax Treatments and Emerging Tax Policy Issues](#)' (Media Release, 12 October 2020).

27 See Chapter 13 'Digital Services Tax'.

28 The Treasury, *Token Mapping Consultation Paper* (n 4) 7.

29 The Treasury, *Token Mapping Consultation Paper* (n 4) 7, referencing a recent paper of the Bank for International Settlements.

30 The Treasury, *Token Mapping Consultation Paper* (n 4) 9 [13].

31 The Treasury, *Token Mapping Consultation Paper* (n 4) 7 [2].

- the legitimate technical criticism and anticipated opportunities of the technology.³²

The consultation paper indicated that ‘after token mapping, licensing and custody reforms are the logical next step for crypto reforms in Australia’ and foreshadowed the Government’s consultation paper proposing a licensing and custody framework for crypto asset service providers.³³ This was released on 16 October 2023 (see following).

The Treasury consulted on the Paper until 3 March 2023, and 91 submissions were received.

The Treasury – Regulating Digital Asset Platforms: Licencing and Custody arrangements

On 16 October 2023, the Treasurer released a Proposal Paper entitled ‘Regulating Digital Asset Platforms’ that recommends making crypto exchanges and digital asset platforms subject to existing Australian financial services laws and requiring platform operators to obtain an Australian Financial Services Licence.³⁴ In addition, digital asset platforms would be required to meet specific obligations that take into account the nature of the platforms, including minimum standards for holding tokens, standards for custody software, and standards when transacting in tokens.³⁵ The Proposal Paper was accompanied by a Factsheet.

The proposals were intended to ‘target identified consumer harms, while supporting innovation in the uses of digital assets and emerging technologies.’³⁶

The Government consulted on its plans until 1 December 2023 and further consultation is proposed with the release of an exposure draft of its proposed legislation in 2024. It is intended that digital currency exchanges will have 12 months to transition to the new regime.

Reserve Bank of Australia – Central Bank Digital Currency

On 9 August 2022, the Reserve Bank of Australia (RBA) announced that it was collaborating with the Digital Finance Cooperative Research Centre on a research project to explore the use cases for a central bank digital currency (CBDC) in Australia.³⁷ The project included the development of a limited pilot CBDC to operate within a ring-fenced environment.

32 The Treasury, *Token Mapping Consultation Paper* (n 4) 12 [24].

33 The Treasury, *Token Mapping Consultation Paper* (n 4) 9 [16].

34 This followed Australian Government, The Treasury, [Crypto asset secondary service providers: Licensing and custody requirements](#) (Consultation Guide, 21 March 2022) (*‘CASSPR: Licensing and custody requirements Consultation Guide’*) released by Treasury on 21 March 2022 pursuant to the former government’s announcement of 8 December 2021 of consultation on licensing and custody requirements concerning custody arrangements.

35 Treasurer, ‘Regulation of digital and crypto assets’ (Media Release, 16 October 2023).

36 The Treasury, *Regulating Digital Asset Platforms* (n 10) 2.

37 RBA, ‘Reserve Bank and Digital Finance Cooperative Research Centre to Explore Use Cases for CBDC’ (Media Release 9 August 2022).

On 23 August 2023, the RBA announced that it had completed the CBDC research project and published its project report, 'Australian CBDC Pilot for Digital Finance Innovation'.³⁸ The report notes the project has helped advance understanding of a number of issues related to the potential issuance of a CBDC in Australia including by:

- yielding valuable insights into how a CBDC could be used by industry to enhance the functioning of the payments system
- highlighting a range of legal, regulatory, technical and operational issues associated with CBDC that need to be better understood
- providing a forum for increased industry engagement and information exchange with policymakers, including relating to the challenges and opportunities in further enhancing the operation of the payments system using new forms of digital money
- identifying a range of areas for future research into the future of money in Australia.

Australian Law Reform Commission – Financial Services Regulation

On 11 September 2020 and in response to the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry, the then Attorney-General referred to the Australian Law Reform Commission (ALRC) for inquiry and report, consideration of the potential simplification of laws that regulate financial services in Australia.³⁹ As part of its inquiry, on 12 October 2022 the ALRC released Background Paper FSL7 'Legislative Framework for Corporations and Financial Services Regulation – New Business Models, Technologies, and Practices'⁴⁰ which examined issues relevant to the extent to which reform of the existing regulatory framework is adaptive to technological developments. Matters considered in this Background Paper included 'What are crypto assets' and 'What are DAOs' (Decentralised Autonomous Organisations – see Chapter 3 of this Report).

Size of the market

Due to the anonymous nature of crypto assets and the lack of visibility over international exchanges, it can be difficult to ascertain with any certainty what portion of Australians own or have transacted with digital assets.

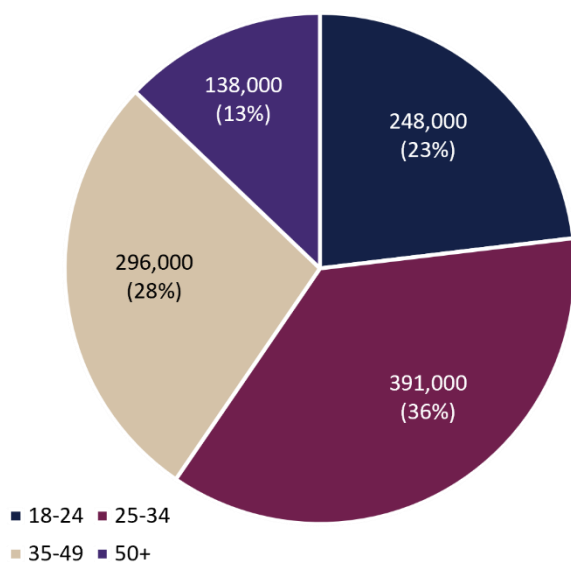
38 RBA, Australian CBDC Pilot for Digital Finance Innovation (n 2).

39 ALRC, '[Review of the Legislative Framework for Corporations and Financial Services Regulation](#)' (11 September 2020); [Terms of Reference to ALRC](#) (11 September 2020).

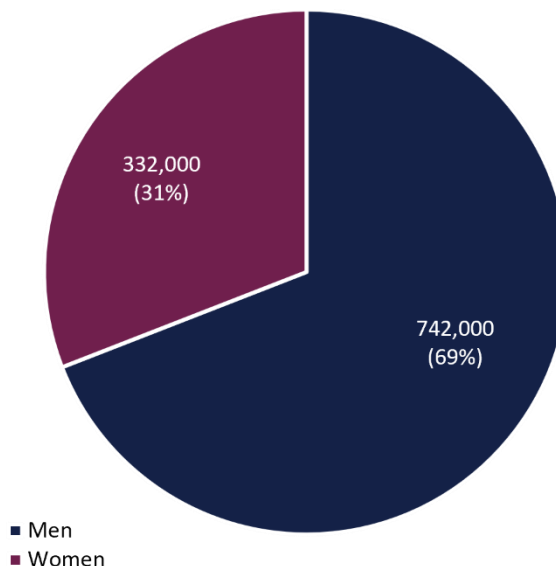
40 ALRC, '[Background Paper FSL7 Legislative Framework for Corporations and Financial Services Regulation – New Business Models, Technologies, and Practices](#)' (Background Paper No FSL7, October 2022) ('*ALRC Background Paper FSL7*').

Roy Morgan research published in April 2022⁴¹ concluded that 5% or over 1 million Australians aged over 18 own at least one cryptocurrency. This aligns with the ATO report in July 2022 that around one million Australians would have a message appear when they prepared their income tax return that they may have capital gains or losses from crypto assets to declare.⁴² The Roy Morgan research estimated the total value of the market in Australia at \$21.6 billion. The research noted that while 59% of crypto asset holders were aged under 35, 65% of the value of all crypto asset holdings sat with people aged over 35, with men representing the vast majority of holders. This research was summarised in the following tables:

Cryptocurrency investors by age - February 2022



Cryptocurrency investors by gender - February 2022

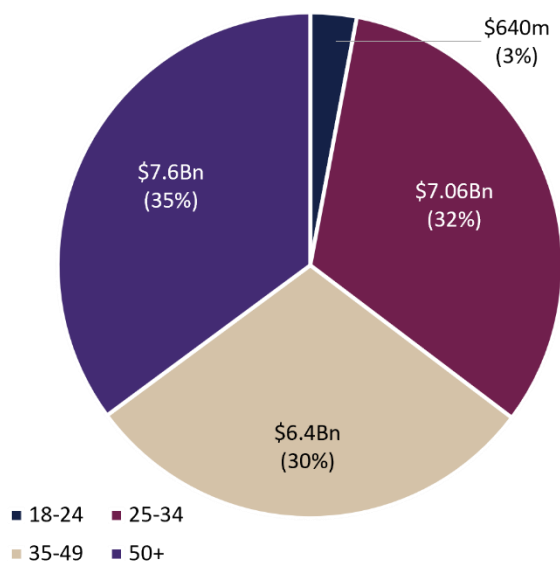


Source: Roy Morgan Single Source, December 2021 – February 2022, n=15,989. Base: Australians 18+.

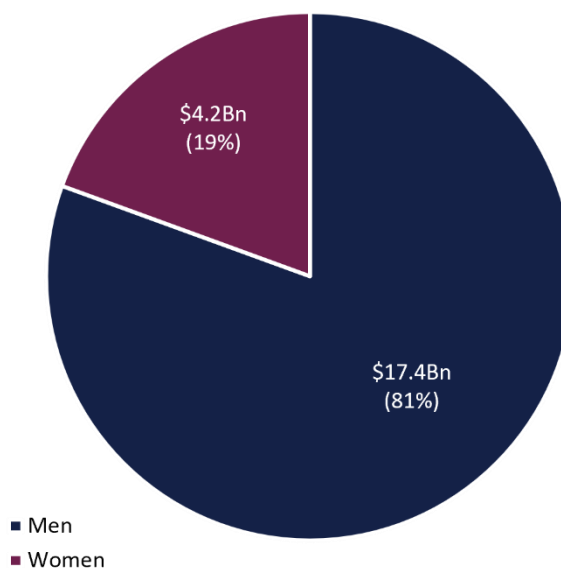
41 [‘Over 1 million Australians now own Cryptocurrencies such as Bitcoin, Ethereum, Ripple, Cardano, Dogecoin and Shiba Inu’](#), Roy Morgan (Press Release, 12 April 2022).

42 ATO, [‘Taking the cryptic out of crypto this tax time’](#) (Web Page, 13 July 2022).

Total value of cryptocurrency investments by age - February 2022



Total value of cryptocurrency investments by gender - February 2022



Source: Roy Morgan Single Source, December 2021 – February 2022, n=15,989. Base: Australians 18+.

These figures may be conservative. Australian based crypto exchange Swyftx has undertaken an annual crypto survey commencing in 2021. The results of the 2023 survey, published in August 2023,⁴³ indicate that 23% of Australians currently own cryptocurrency and over 900,000 further Australians intend to enter the cryptocurrency market in the next 12 months. This survey indicated that the average cryptocurrency profit reported over the past year was \$8,218 per holder.

What is clear is that ownership of crypto assets in Australia is significant and increasing, which underlines the importance of ensuring that the taxation system deals with crypto asset transactions appropriately.

Observation 2.1

Crypto asset adoption continues to grow within Australia. Certainty and clarity in relation to the application of tax laws will assist to ensure that ownership of these assets does not present a risk to the Australian tax revenue base.

Investment in digital assets is increasing around the world. It was reported by the OECD that the value of crypto asset markets reached USD 3 trillion as at the end of 2021.⁴⁴

43 [‘Australian Digital Assets Survey’, Swyftx \(Web page, August 2023\).](#)

44 IMF, [New Evidence on Spillovers Between Crypto Assets and Financial Markets](#) (Working Paper, September 2023) 2.

Chapter 3: Digital Assets

Key Points

- Recognising the background to and context of the Board's review, in this Report 'digital assets' refers to assets that are now often referred to as 'crypto assets'. The terms 'digital assets' and 'crypto assets' or 'crypto' are used interchangeably in this Report.
- The ecosystem of digital (crypto) assets and transactions is continually evolving.
- Distributed Ledger Technology (DLT) is the primary driver of the crypto ecosystem. It is designed to enable electronic transactions without an intermediary (i.e. 'Peer-to-Peer' transactions) with security and pseudo anonymity.
- DLT has become widespread with cryptocurrencies, but other products also rely on DLT.
- A significant and relatively recent development relying on DLT is DeFi which aims to provide a 'Peer-to-Peer' alternative to using central intermediaries or institutions such as banks, brokerages and clearing houses.
- Notwithstanding the aim of DLT to facilitate 'Peer-to-Peer' transactions without the need for intermediaries, the growth of service providers and intermediaries in the crypto ecosystem has given rise to the generally (although not universally) accepted need for regulation.

Introduction

A significant issue in any review of digital assets is that there is 'currently no consensus – either in Australia or globally – on the meaning of key concepts in the crypto space. A single concept may have varied and conflicting meanings across industry, academia, and government institutions.'⁴⁵ It is therefore essential that the meanings of relevant terms used in this Report are clearly set out.

The purpose of this chapter is to set out the meaning of 'digital assets' for the purposes of this review, describe how digital assets have evolved and the different arrangements in the digital asset (or crypto) ecosystem, and explain some of the common terms used in this Report. This will establish the basis for the analysis of the tax treatment of digital assets and transactions in the subsequent chapters.

45 The Treasury, *Token Mapping Consultation Paper* (n 4) 11 [23].

What are digital assets?

Background to the term ‘Digital Assets’

The term ‘digital assets’ has historically referred to media formats that were traditionally physical items, such as photos, videos and documents, that began to be created, stored and shared in a digital environment. However, with the emergence of **blockchain technology**, the term ‘digital assets’ expanded to include blockchain-backed **cryptocurrencies** and **non-fungible tokens** (NFTs), as well as asset-backed **tokens**. As these new blockchain-backed digital assets have become more widely adopted, the meaning of the term ‘digital assets’ has shifted so that it now is primarily focused on assets that are backed by a **distributed ledger**, rather than digital media files.⁴⁶

This relatively more recent meaning of the term ‘digital assets’ is reflected in the Reports that led to the Board’s Review.⁴⁷ For instance, in its ‘overview of digital asset classes and the current market for these products’, the Senate Committee made particular reference to **cryptocurrency**, **decentralised finance** (DeFi), **stablecoins**, **central bank digital currencies** (CBDCs) and **NFTs**.

In announcing the Board’s Review on 8 December 2021, the former Australian government indicated that the Review would ‘provide clarity to holders of crypto-assets’.⁴⁸ In its Report, the Senate Select Committee identified that the Australian Securities and Investments Commission (ASIC) had used the term ‘crypto-asset’ as an umbrella term to describe products that are also commonly referred to as ‘digital assets’, ‘virtual assets’ or ‘digital tokens’.⁴⁹ ASIC also said:⁵⁰

A crypto-asset is a digital representation of value or contractual rights that can be transferred, stored or traded electronically. Crypto-assets use cryptography, distributed ledger technology or other technology to provide features such as security and pseudo-anonymity. A crypto-asset may or may not have identifiable economic features that reflect fundamental or intrinsic value.

In October 2023, the Treasury stated that ‘A digital asset refers to a **token** and its associated entitlements (i.e. a digital ‘bearer asset’) and that a ‘true digital token’ is a ‘crypto token’.⁵¹

In its Background Paper FSL7 issued in October 2022, the ALRC indicated that ‘crypto assets’ include **cryptocurrencies** and **tokens** generally⁵² whilst recognising that ‘Crypto assets are defined in different ways and for different purposes.’⁵³ It noted that the Treasury Consultation Paper of 21 March 2022 in relation to

46 [‘All about digital assets & how to create digital assets marketplace with Nasdaq’s Marketplace Services Platform’](#), *Nasdaq* (Web Page, accessed 20 January 2024).

47 See Chapter 2 of this Report.

48 The Treasury, *Transforming Australia’s Payments System* (n 22) 5.

49 *Senate Select Committee Report* (n 9) [2.4].

50 *Senate Select Committee Report* (n 9) [2.5].

51 The Treasury, *Regulating Digital Asset Platforms* (n 10) 5.

52 *ALRC Background Paper FSL7* (n 40) 7-1.

53 *ALRC Background Paper FSL7* (n 40) 7-4 [18].

Licensing and Custody arrangements for Crypto asset service providers⁵⁴ defined a ‘crypto asset’ as ‘a digital representation of value that can be transferred, stored, or traded electronically’, and said in relation to crypto assets that they use cryptography and distributed ledger technology; they have three primary uses (as an investment, as a means of exchange, and to access goods and services); and they are commonly referred to as speculative assets with volatile prices and minimal to no regulatory oversight.⁵⁵

‘Digital Assets’ for the purposes of this Review

From this background, it can be seen that the term ‘digital assets’ in the context of and for the purposes of this Review are digital assets that involve **distributed ledger technology** and **cryptography**.

These digital assets are sometimes referred to as ‘crypto assets’ or ‘crypto’. The terms ‘digital assets’ and ‘crypto assets’ or ‘crypto’ are used interchangeably in this Report.

Observation 3.1

Recognising the background to and context of the Board’s review, in this Report ‘digital assets’ refers to assets that are now often referred to as ‘crypto assets’ or ‘crypto’. The terms ‘digital assets’, ‘crypto assets’ and ‘crypto’ are used interchangeably in this Report.

The terms in bold in the preceding paragraphs are explained in the following paragraphs.

Distributed ledger technology

Overview

Distributed ledger technology (DLT) was developed to enable assets to be transferred using the internet with trust as to the valid ownership of the asset, whilst maintaining pseudo-anonymity. It overcame the ‘double spend’ problem – that is, the risk that the digital asset transferred was a copy rather than the original. In essence, DLT enabled the concept of scarcity and authenticity for digital assets, which was previously not possible.

A ‘Distributed Ledger’ is, in basic terms, a ledger (or record) that is distributed (or dispersed) across various locations (or nodes), with each location maintaining an identical record of the ledger. In the crypto ecosystem, the ledger contains the detail of every past transaction in the crypto assets that are recorded on

54 The Treasury, *CASSPR: Licensing and custody requirements Consultation Guide* (n 34).

55 *ALRC Background Paper FSL7* (n 40) 7-5.

the ledger, in encrypted form. Each node⁵⁶ maintains a separate and identical copy of the ledger. Any new transaction involving crypto assets will only be added to the ledger after the nodes reach ‘consensus’ that the transaction is ‘valid’ (which includes validating that the asserted ownership of the crypto assets is consistent with the chain of transactions on the ledger). Holders of crypto assets can initiate transactions with their crypto assets only by using their unique ‘private key’, which is distinguished from the ‘public key’ by which they are publicly identified on the ledger.

Background

In 2017, the background to DLT was explained as follows:

DLT comes on the heels of several peer-to-peer (P2P) technologies enabled by the internet, such as email, sharing music or other media files, and internet telephony. However, internet-based transfers of asset ownership have long been elusive, as this requires ensuring that an asset is only transferred by its true owner and ensuring that the asset cannot be transferred more than once, i.e. no double-spend. The asset in question could be anything of value.

In 2008, a landmark paper written by an as yet unidentified person using the pseudonym Satoshi Nakamoto, ‘Bitcoin: A Peer-to-Peer Electronic Cash System’, proposed a novel approach to transferring ‘funds’ in the form of ‘Bitcoin’ in a P2P manner. The underlying technology for Bitcoin outlined in Nakamoto’s paper was termed Blockchain, which refers to a particular way of organizing and storing information and transactions. Subsequently, other ways of organizing information and transactions for asset transfers in a P2P manner were devised – leading to the term “Distributed Ledger Technology” (DLT) to refer to the broader category of technologies.

DLT refers to a novel and fast-evolving approach to recording and sharing data across multiple data stores (ledgers), which each have the exact same data records and are collectively maintained and controlled by a distributed network of computer servers, which are called nodes. One way to think about DLT is that it is simply a distributed database with certain specific properties.⁵⁷

Two core attributes of a DLT-based infrastructure are:

- the ability to store, record and exchange ‘information’ in digital form across different, self-interested counterparties without the need for a central record-keeper (i.e. peer-to-peer) and without the need for trust among counterparties
- ensuring there is no ‘double-spend’ (i.e. the same asset or token cannot be sent to multiple parties).

56 Or, at any given time, a significant number of the nodes.

57 World Bank, *DLT and Blockchain* (n 1) 1.

Key Features of DLT

There are three features that are generally considered key to the effectiveness of DLT:⁵⁸

1. The distributed nature of the ledger.
2. A consensus mechanism.
3. Cryptographic mechanisms.⁵⁹

1. Distributed nature of the ledger

The distributed nature of the ledger means that ‘no single entity in the network can amend past data entries in the ledgers and no single entity can approve new additions to the ledger. Instead, a pre-defined, decentralized consensus mechanism is used to validate new entries in the ledger...’ There exists, at any point in time, only one version of the ledger and each network participant owns a full and up-to-date copy of the entire ledger. Every local addition to the ledger by a network participant is propagated to all nodes. After validation is accepted, the new transaction is added to all respective ledgers to ensure data consistency across the entire network.⁶⁰

2. Consensus mechanism

The existence of a consensus mechanism as part of a DLT platform ‘requires the participants in the network (nodes) to reach a consensus regarding the validity of new data entries by following a set of rules ... which is specified in the algorithmic design of the [distributed ledger].’⁶¹ This establishes whether a particular transaction is legitimate or not and is important to handle conflicts between multiple simultaneous competing entries (such as different transactions on the same asset proposed by different nodes).

There are various consensus mechanisms, but the two most significant are ‘proof of work’ (which is used by the Bitcoin blockchain) and ‘proof of stake’ (which since September 2022 has been used by the Ethereum blockchain). ‘Proof of work’ and ‘proof of stake’ are discussed further below.

3. Cryptographic mechanisms

Consensus can be achieved by reliance on cryptographic mechanisms. Cryptographic mechanisms refer to the mechanism by which each new transaction record is ‘hashed’, i.e. a digital fingerprint similar in uniqueness to a human fingerprint is computed for the transaction, with only one hash output possible for each transaction, reflecting as it does the complete history of transactions in relation to the subject ‘token’.⁶² The significance of cryptographic mechanisms is that they enable detection of any tampering of

58 World Bank, *DLT and Blockchain* (n 1) 5.

59 Cryptographic mechanisms are not essential to DLT. For example, digital currencies use DLT and cryptocurrencies are a form of digital currency that rely on cryptographic techniques to achieve consensus.

60 World Bank, *DLT and Blockchain* (n 1) 5.

61 World Bank, *DLT and Blockchain* (n 1) 6.

62 See explanation of ‘tokens’ below.

the underlying transaction data.⁶³ Cryptographic mechanisms provide security and protect system integrity in a decentralised ledger that is maintained by a network of anonymous participants, without any need for placing trust in a central party to validate transactions to ensure ownership of accounts and balances.⁶⁴

Cryptographic mechanisms involve each participant in the network having a public key and a private key. The private key is known only by the individual user and is used to encrypt a 'hash' of a digital message (the encrypted hash being known as the 'digital signature') which is received by other network participants who can use the individual's public key (which is shared) to validate that the digital message was encrypted with the individual's private key and that the individual is the sender of the message.⁶⁵ By this mechanism, transactions can occur with confidence that the contracting party has the ownership rights that they assert.

Blockchain

Blockchain is a common type of DLT.⁶⁶

The High Court of Justice of England and Wales in *Tulip Trading* described blockchain as follows:

the blockchain constitutes a public registry recording every transaction in the relevant digital asset. However, whilst the blockchain will show that a transaction has taken place and therefore the location of the asset on the network, it will not disclose the identity of the parties to that transaction. Instead, the assets are shown as held at a digital address. Addresses have both public keys, which identify them on the network, and private keys, knowledge of which allows dealings in assets held at that address to occur through the use of a digital signature. Both forms of address comprise a series of letters and numbers.⁶⁷

Whilst the *Tulip Trading case* is concerned with blockchain, the description would apply to all distributed ledger technology, of which blockchain is only one type. The defining feature of blockchain networks is that, as the name suggests, they involve a 'chain' of 'blocks'. Each block in the blockchain contains a unique set of validated transactions and each with a cryptographic fingerprint (i.e. the 'hash'). The information remains accessible for verification but cannot be tampered with.

How blockchain works

The World Bank has said:

63 World Bank, *DLT and Blockchain* (n 1) 8-9.

64 World Bank, *DLT and Blockchain* (n 1) 3.

65 World Bank, *DLT and Blockchain* (n 1) Figure 3, 9.

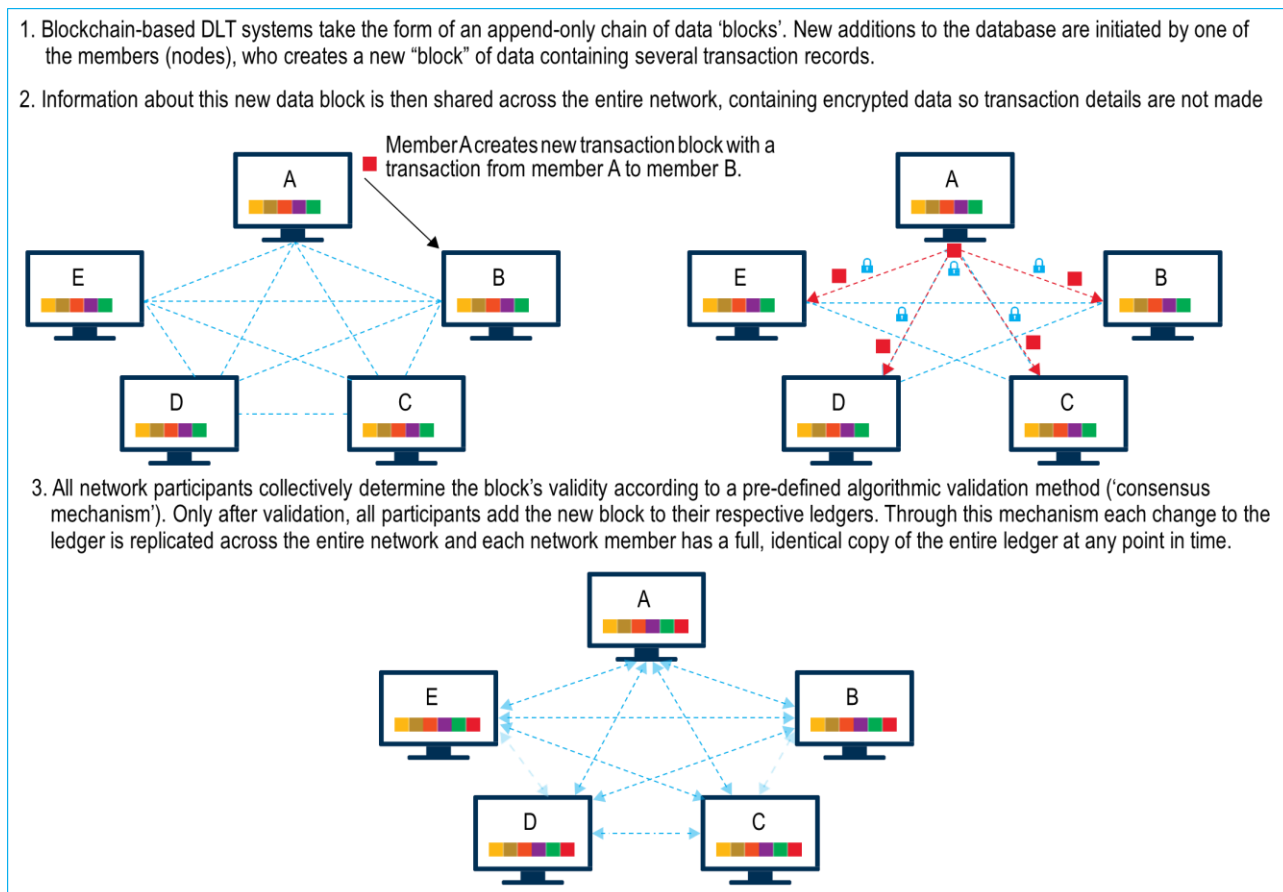
66 Other types of DLT are Tangle and Hashgraph: Nabil El Ioni and Claus Pahl, '[A Review of Distributed Ledger Technologies](#)' (Conference Paper, OTM, October 2018); also see George Lawton, '[6 alternatives to blockchain for businesses to consider](#)', *TechTarget* (Web Page, 19 September 2023).

67 *Tulip Trading v Bitcoin Association and others* [2022] EWHC 667 (Ch) [18] (Falk J) (overturned on appeal but not on this point).

Blockchain, a particular type of DLT, uses cryptographic and algorithmic methods to create and verify a continuously growing, append-only data structure that takes the form of a chain of so-called ‘transaction blocks’ – the blockchain – which serves the function of a ledger.

New additions to the database are initiated by one of the members (nodes), who creates a new ‘block’ of data, for example containing several transaction records. Information about this new data block is then shared across the entire network, containing encrypted data so transaction details are not made public, and all network participants collectively determine the block’s validity according to a pre-defined algorithmic validation method (‘consensus mechanism’). Only after validation, all participants add the new block to their respective ledgers. Through this mechanism each change to the ledger is replicated across the entire network and each network member has a full, identical copy of the entire ledger at any point in time. This approach can be used to record transactions on any asset which can be represented in digital form.⁶⁸

Shown diagrammatically, a blockchain distributed ledger works as follows:⁶⁹



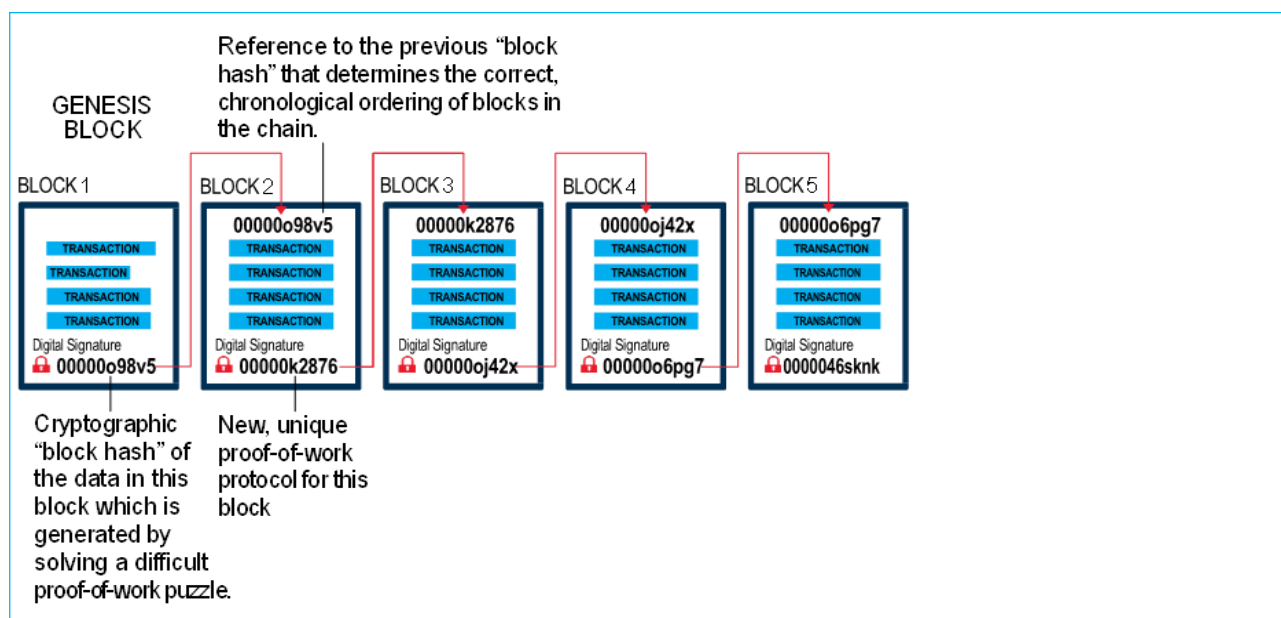
Source: Adapted from: ‘Dubai Aims to Be a City Built on Blockchain’, By Nikhil Lohade, 24 April 2017, [Wall Street Journal](#)

68 World Bank, *DLT and Blockchain* (n 1) 1.

69 World Bank, *DLT and Blockchain* (n 1) 2.

Blocks are not independent of one another. Rather, all blocks are intrinsically related insofar as they are linked in linear, sequential order by their own unique hashes that act as fingerprints – hence the concept of ‘blocks’ in a ‘chain’ (as stated earlier).

The transactions in a block are ‘hashed’ to create a unique hash code for the block. These hash codes are used to connect blocks. Blocks are added one after the other in linear, chronological order, with each containing its own hash code and the code of the previous block. This links the blocks together to form a chain. Shown diagrammatically, the blockchain is:⁷⁰



Consensus mechanisms: ‘Proof of Work’ vs ‘Proof of Stake’

A number of different blockchain networks have been developed since October 2008 when Satoshi Nakamoto published the paper ‘Bitcoin: A Peer-to-Peer Electronic Cash System’.⁷¹ Each network has its own blockchain which is defined and controlled by its own ‘protocols’ – i.e. underlying rules, guidelines and algorithms. These protocols determine how data is stored, transmitted, and validated across the network, and are intended to ensure the data’s security, consistency, and reliability.⁷²

The two most prominent blockchain networks are the Bitcoin blockchain/network, and the Ethereum blockchain/network.

70 World Bank, *DLT and Blockchain* (n 1) 9.

71 Satoshi Nakamoto, ‘[Bitcoin: A Peer-to-Peer Electronic Cash System](#)’ (Paper, October 2008).

72 Luis Soares, ‘[Blockchain Protocols: The Fundamentals](#)’, *LinkedIn* (Blog Post, 29 March 2023).

Proof of Work – the Bitcoin Blockchain

The consensus mechanism for the Bitcoin blockchain uses a ‘proof of work’ protocol which involves a computational challenge that is hard to solve (in terms of computing power and processing time) and the process of generating proof-of-work is called ‘mining’, with each ‘miner’ operating a node.⁷³ Each miner that produces a valid proof-of-work in the Bitcoin blockchain receives a reward in bitcoin, which is the cryptocurrency that is native to the Bitcoin blockchain (see explanation of cryptocurrencies below). The reward comprises two parts:⁷⁴

1. The ‘Block Subsidy’ which is an amount of new bitcoin that the miner who produces and adds a block in the blockchain is allowed to ‘mint’. The amount of the block subsidy is determined by an algorithm in Bitcoin’s source code: the subsidy started at 50 bitcoin per block and is cut in half every 210,000 blocks or roughly 4 years. The Block Subsidy since 11 May 2020 has been 6.25 bitcoin, and it will halve again to 3.125 sometime in 2024. The regular halving of the Block Subsidy ensures that the bitcoin supply will never exceed 21 million bitcoin, with the last new bitcoin expected to be mined sometime around the year 2140.
2. Transaction fees which are not mandatory but are paid by users to miners to get their transaction included in the blockchain. Users are incentivised to pay these fees because the more a user pays, the higher the chance their transaction will be processed quickly as there is only a limited amount of space in each block.

With the regular halving of the Block Subsidy, transaction fees will slowly begin to make up most and then all of the block reward.

As miners with a small percentage of the mining power stand a very small chance of discovering the next block alone, they will often join a mining pool operated by third parties to coordinate groups of miners.⁷⁵

It is unknown how many nodes there are in the Bitcoin network, with estimates varying. Some sources calculate just over 13,000 Bitcoin nodes, whereas others have estimated there were about 200,000 nodes running at the peak of the 2017 market, and others that there were 83,000 Bitcoin Core nodes active in January 2021 which declined in 2022 to roughly 50,000.⁷⁶ A recent analysis suggested there are around 9,000 active Bitcoin nodes.⁷⁷ ‘Bitnodes’ estimates the relative size of the Bitcoin peer-to-peer network by

73 World Bank, *DLT and Blockchain* (n 1) 5; In Submission A07, 25, Doxed Capital stated that ‘Blockchain miners are people or organisations who operate specially configured computers called application-specific integrated circuits ... to mine proof of work cryptocurrencies by solving cryptographic problems.’

74 ‘[How Bitcoin Fees Work](#)’, *River Learn* (Web Page, accessed 27 January 2024); ‘[Block Subsidy](#)’, *River Learn* (Web Page, accessed 27 January 2024); ‘[What Is a Bitcoin Halving](#)’, *River Learn* (Web Page, accessed 27 January 2024); Euny Hong, ‘[How Does Bitcoin Mining Work](#)’, *Investopedia* (Web Page, 18 October 2023).

75 Euny Hong, ‘[How Does Bitcoin Mining Work](#)’, *Investopedia* (Web Page, 18 October 2023).

76 ‘[What is a Bitcoin node? A beginner’s guide on blockchain nodes](#)’, *Cointelegraph* (Web Page, accessed 27 January 2024).

77 ‘[How Many Nodes Ethereum Has: Estimating The Total Number of Nodes In the Ethereum Network](#)’, *Trade Wise* (Web Page, accessed 27 January 2024).

finding all of its reachable nodes which on 16 January 2024 numbered at 16,367⁷⁸ with the Global Bitcoin Nodes estimated at 52,204.⁷⁹

Proof of Stake – the Ethereum Blockchain

In September 2022, the Ethereum blockchain changed its consensus mechanism from a ‘proof of work’ protocol to a ‘proof of stake’ protocol. A proof of stake protocol is less energy-intensive and requires less hardware than a proof of work protocol. A proof of stake protocol is based on ‘validators’ (rather than miners) who are responsible for the nodes on the network. Validators ‘stake’⁸⁰ a certain amount of their holdings in the cryptocurrency native to the blockchain (which is ether for the Ethereum Blockchain) and their stake will be destroyed (or ‘burned’) if they attempt to undermine the system or fail to validate accurately and reliably.⁸¹ For each new block in the blockchain, a validator is chosen to create (forge) the new block and the other validators then validate that block. The process of creating the new block is called ‘forging’ or sometimes ‘minting’. Validators may also be called ‘forgers’, as well as ‘stakers’.

Validators receive a reward for creating the new block in the form of the cryptocurrency native to the blockchain. Ether is minted for each block proposed and at every ‘epoch’ checkpoint for other validator activity related to reaching consensus. The total issuance is divided among validators with about one-eighth of the total issuance going to the block proposer and the remainder being distributed across the other validators.

Block proposers also receive transaction fees which come from recycled ether rather than new ether. These transaction fees are based on the ‘gas fee’ for the transaction. Every transaction on the Ethereum network requires the user to pay a gas fee in order for the transaction to be executed, with the gas fee paid in ether and taken from the transaction. The gas fee has two parts:⁸²

78 [‘Reachable Bitcoin Nodes’](#), *Bitnodes* (Web Page, accessed 16 January 2024).

79 [‘Global Bitcoin Nodes’](#), *Bitnodes* (Web Page, accessed 16 January 2024).

80 It is noted that more recently, the terms ‘stake’ and ‘staking’ have been used by market participants in a broader, less specific way, simply to refer to transferring or locking certain capital or value to smart contracts in return for a reward, even where no positive contribution is made by the staker and/or where the staked capital or value is not at risk: The Treasury, *Token Mapping Consultation Paper* (n 4) definition of ‘staking’ in Annexure 5 Glossary, 56; UK Law Commission, *Digital Assets: Final Report* (n 8) xv.

81 [‘Proof-of-Stake \(POS\)’](#), *Ethereum* (Web Page, 29 September 2023); Emily, [‘Ethereum Staking: How To Stake ETH Securely’](#), *Ledger Academy* (Web Page, 11 September 2023).

82 [‘What are Ethereum Gas Fees’](#), *Cryptopedia* (Web Page, 17 November 2023); Allie Grace Garnett, [‘Ethereum gas fees: The cost of doing \(crypto\) business’](#), *Britannica Money* (Web Page, accessed 17 January 2024); [‘Relation between gas fees and validator rewards’](#), *Piertwo* (Web Page, accessed 17 January 2024).

- The 'base fee' is based on the complexity of the transaction (e.g. simply sending ether typically has a lower base fee than transactions using complicated smart contracts (see below)) and the transactional capacity of the network at the time of execution (with base gas fees higher at times of peak transactions, so helping to bring the network demand back into supply-and-demand equilibrium). The base fees are 'burnt' (i.e. removed from circulation permanently)⁸³ to offset some of the inflation from the issuance of new ether to validators when the block is created. In this regard, it is noted that unlike bitcoin, there are no limits on the total amount of ether. There were about 120.2 million ether in circulation as at 30 August 2023.⁸⁴
- The 'priority fee' or 'tip fee' which is optional but is paid by a user to get their transaction processed more quickly. The validator receives this portion of the gas fee as a transaction fee.

In order to become a validator on the Ethereum network, a minimum stake of 32 ether is required. It is possible to engage a staking service, and merely provide the 32 ether to stake without undertaking any further activity. Pooled staking is also available, for those who wish to stake less than 32 ether.⁸⁵

The Ethereum blockchain enables smart contracts, which in turn enable 'Decentralised Finance' (DeFi).⁸⁶ 'Smart Contracts' and 'DeFi' are discussed below.

Similar to Bitcoin, it is unknown precisely how many nodes there are on the Ethereum network. A recent analysis estimated that there were around 8,000 active Ethereum nodes.⁸⁷ Ethernodes recently identified 6,985 nodes or, after filtering for unsynced nodes, 6,077.⁸⁸

How blockchain transactions work

Bitcoin blockchain transactions

Bitcoin blockchain transactions are based on an 'unspent transaction output' (UTXO) protocol.⁸⁹

From the perspective of a user, a UTXO shows an amount of cryptocurrency that the user holds. By way of example: if person A has 0.45 bitcoin in their wallet, this may be in the form of one UTXO for 0.45 bitcoin.⁹⁰

83 ['Intro to Ether', Ethereum](#) (Web Page, 16 August 2023; James Howell, ['What is Ether \(ETH\)? – A Beginner's Guide', 101 Blockchains](#) (Web Page, 4 November 2022).

84 Peter Wind, ['How Many Ethereum Are There?', Coincodex](#) (Web Page, 30 August 2023).

85 Manoj Sharma, ['How to Stake Ethereum', Investopedia](#) (Web Page, 11 December 2023).

86 Whilst the Bitcoin blockchain does enable 'smart contracts', they do not operate in the same way and have relatively limited functionalities: Mohammad Musharraf, ['Bitcoin Smart Contracts and Apps: Do they even exist?', Ledger Academy](#) (Web Page, 23 November 2023).

87 ['How Many Nodes Ethereum Has: Estimating The Total Number of Nodes In the Ethereum Network', Trade Wise](#) (Web Page, accessed 27 January 2024).

88 ['Ethereum Mainnet Statistics', Ethernodes](#) (Web Page, accessed 16 January 2024).

89 Jake Frankenfield, ['UTXO Model: Definition, How It Works, and Goals', Investopedia](#) (Web Page, 15 April 2022); ['Unspent Transaction Output \(UTXO\)', Binance Academy](#) (Web Page, accessed 27 January 2024); ['What is a Bitcoin unspent transaction output \(UTXO\)?', Kraken](#) (Web Page, accessed 27 January 2024).

90 It could also be in the form of two or more UTXOs adding up to 0.45 bitcoin.

If person A wants to transfer 0.3 bitcoin to person B, they will create a transaction that essentially instructs the network to take their 0.45 bitcoin UTXO as an input and send a 0.3 bitcoin UTXO to person B and return a 0.15 bitcoin UTXO back to them. After the transaction, the 0.45 bitcoin UTXO is now 'spent' and cannot be reused, and two new UTXOs have been created – a 0.3 bitcoin UTXO and a 0.15 bitcoin UTXO.

From the perspective of the network, a cryptocurrency transaction is a transfer of information within a database using the technique of UTXOs.

Ethereum blockchain transactions⁹¹

Ethereum is one of the few blockchains that use an accounts-based model instead of a UTXO model. Under this model and from the perspective of a user, if person A holds 0.45 ether then their account will show this holding. If they want to transfer 0.3 ether to person B, they send an instruction to the network that will reduce their account by 0.3 ether and increase person B's account by 0.3 ether.

The Ethereum blockchain has two types of accounts: Externally Owned Accounts (EOA) which are controlled by users via private keys (similar to a bank account being controlled by a Personal Identification Number (PIN)) and Contract Accounts which are controlled by smart contract code and so cannot initiate transactions but will function in accordance with their code when a transaction is sent to them. If a receiving account is an EOA, its balance will increase; if a receiving account is a Contract Account, its code will be executed, which may involve calling another smart contract, sending ether to another smart contract, sending ether to an EOA, etc. Ultimately, however, every transaction has its origin in a transaction created by an EOA.

Fiat, digital and crypto currencies

Fiat Currencies

Fiat currency is money that is issued by a government and designated as legal tender. The RBA currently issues two forms of money:

- physical money in the form of banknotes
- digital money in the form of balances held in accounts that commercial banks and some other types of financial institutions can hold at the RBA to settle payment obligations between each other.⁹²

A government's central bank could also issue a CBDC. A CBDC would be 'a new form of money, denominated in a national currency, that would be issued as a direct liability of the central bank'.⁹³ A CBDC

91 Jad Mubaslat, 'What is Ethereum's Accounts-Based Model and How Does it Work?', *Rain Blog* (Blog Post, 16 June 2022); 'Bitcoin UTXO vs Ethereum's Account-Based Blockchain Transactions: Explained Simply', Hackernoon (Web Page, 23 August 2021).

92 'Central Bank Digital Currency', RBA (Web Page, accessed 27 January 2024).

93 RBA, *Australian CBDC Pilot for Digital Finance Innovation* (n 2) 3.

could be based on a centralised ledger or alternatively Distributed Ledger Technology. The RBA is currently actively researching CBDC as a complement to existing forms of money.⁹⁴

Digital Currencies

By contrast with a CBDC, non-fiat digital currencies have been said to have three features:

1. They are not backed by any underlying asset, have zero intrinsic value, and do not represent a liability on any institution.
2. They are exchanged through distributed ledgers absent trust between partners and absent central record keeping.
3. As a result of the above two characteristics, they do not rely on specific institutional arrangements or intermediaries for peer-to-peer exchanges.⁹⁵

Cryptocurrencies

Cryptocurrencies are a subset of digital currencies that rely on cryptographic techniques to achieve consensus, for example bitcoin and ether.⁹⁶ Bitcoin is the base unit (or native cryptocurrency) on the Bitcoin blockchain and ether is the base unit (or native cryptocurrency) on the Ethereum blockchain.

Cryptocurrencies can be split into smaller units to facilitate smaller transactions. The smallest denomination of bitcoin is the Satoshi, with 100 million satoshis to one bitcoin. Ether has a number of denominations, the most commonly used of which are the wei (1 quintillionth of 1 ether) and the Gwei (1 billion wei).⁹⁷

Smart contracts

A 'smart contract' is a DLT-based software code that carries out, controls, and documents relevant events and actions according to predefined requirements and rules.⁹⁸ It is a type of software that runs in a predefined and deterministic manner without risk of intervention.⁹⁹ A smart contract enables unrelated parties to maintain anonymity¹⁰⁰ and yet in effect transact across the DLT platform with trust that the transaction will proceed only in the expected way, by reason of the smart contract being self-fulfilling once the pre-determined requirements are met.

94 [Reserve Bank of Australia website](#).

95 World Bank, *DLT and Blockchain* (n 1) 3.

96 World Bank, *DLT and Blockchain* (n 1) 3.

97 Jake Frankenfield, '[Satoshi in Bitcoin Explained: What It Is and How Much It is Worth](#)', *Investopedia* (Web Page, 12 February 2023).

98 Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 3.

99 The Treasury, *Token Mapping Consultation Paper* (n 4) 14, [35].

100 Although not all smart contracts maintain anonymity – for instance, a smart contract code might require a 'know your client' token of some kind.

It is important to recognise that a ‘smart contract’ is not a legal contract but a collection of code and data that is deployed to multiple computers on a decentralized public network. Users interact with the smart contract via messages cryptographically signed with their private key.

As indicated previously, smart contracts are able to run on the Ethereum blockchain.¹⁰¹

Web3

Some argue that smart contracts and their underlying blockchain-based distributed ledger technology herald a new, third, era for the internet after the first era involving participants largely navigating static web pages, and the second era of a more interactive internet with user-generated content (the read/write web). This third era or so-called ‘Web3’ is argued to overcome the centralization of ‘Web1’ and ‘Web2’ and to comprise an internet where users are no longer subject to centralised control because they protect their own privacy by encrypted wallets, where censorship by central authorities is not possible due to the decentralised nature of the database, and where control by central authorities is not possible due to governance occurring by way of governance tokens.¹⁰²

Tokens

A crypto token refers to a unit of digital information that can be exclusively used or controlled by a person,¹⁰³ despite that person not controlling the host hardware where that token is recorded. The crypto token is recorded on a distributed ledger and the authenticity of the crypto token is established by cryptography.¹⁰⁴ A crypto token has also been described as a ‘tradeable digital asset that exists on a distributed ledger (usually a blockchain) that is controlled by a private cryptographic key’.¹⁰⁵

Broadly speaking, it is possible to distinguish two general categories of tokens. The first category consists of tokens that natively form part of the consensus mechanism of the underlying blockchain, the most prominent of which are the cryptocurrencies bitcoin and ether. Typically, these tokens are the means of payment for transaction fees for their blockchain. The second category consists of tokens that are created as smart contracts on top of smart contract-capable blockchains¹⁰⁶ (such as the Ethereum blockchain).

101 Whilst the Bitcoin blockchain does enable ‘smart contracts’, they do not operate in the same way and have relatively limited functionalities: Mohammad Musharraf, ‘[Bitcoin Smart Contracts and Apps: Do they even exist?](#)’, *Ledger Academy* (Web Page, 23 November 2023).

102 Thomas Stackpole, ‘[What is Web3?](#)’, *Harvard Business Review* (Web Page, 10 May 2022).

103 A crypto token is controlled by a person via transactions signed with the private key corresponding to the public address to which the token is assigned.

104 The Treasury, *Token Mapping Consultation Paper* (n 4) 13, [33]-[34].

105 Allen, DWE, Berg, C, Lane, A, ‘[Why Airdrop Cryptocurrency Tokens?](#)’ (2022, revised 2023) *Journal of Business Research* (forthcoming) 3 (‘Allen, Berg and Lane (2023)’) citing Voshmgir, Shermin, 2020, ‘Token Economy: How the Web3 Reinvents the Internet’, Token Kitchen.

106 Allen, Berg and Lane (2023) (n 105).

Cryptocurrencies are tokens (or digital tokens) that are described as ‘fungible’ because they are identical to each other, they hold value¹⁰⁷ and they are divisible.

Non-fungible tokens (NFTs)

By contrast with fungible tokens, NFTs are ‘representations of unique data. Each token is mathematically unique and unable to be fractionalised, unlike many fungible crypto assets.’¹⁰⁸

NFTs is a description of the technology used where something unique or a record of something unique, is maintained on a blockchain or distributed ledger. What an NFT is, depends on the nature of the information that is provided when an NFT is transferred and recorded. For example, NFTs underpin many blockchain use cases, such as in relation to supply chain management to track the movement of a particular good at a particular time, or records of trademarks. Other NFTs exist purely in the digital realm, such as collectors items, such as jpeg images, or rights in those images.¹⁰⁹

Assets can be ‘tokenised’ so that ownership becomes connected with control of an NFT as recorded on the blockchain. Ownership can then be transferred by transfer of the token as recorded on the blockchain.

Some examples of non-fungible tokens include:

- NFTs signalling ownership and authenticity of digital works by recording the creation (‘minting’) of the NFT which can be subsequently sold through blockchain technology. Some examples of NFTs on the Ethereum blockchain are:
 - ‘Bored Ape Yacht Club’ images
 - a JPG file made by a digital artist known as Beeple comprising a collage of his previous works, which sold for almost \$70 million in 2021.

The public can view the images for free online, but only the owner of the NFT can claim ownership of the digital image.

- An NFT representing the first tweet sent on the Twitter platform (on 21 March 2006), which sold for \$2.9 million in 2021.
- The Perth Mint Gold Token, a ‘partnership between Perth Mint and Trovio Capital Management which digitises physical gold in the form of GoldPass certificates and makes a tokenised form of these certificates available on a public blockchain where investors, traders and institutions can buy and sell them on Digital Asset Exchanges’.¹¹⁰ The Perth Mint Gold Token was discontinued on 31 October 2023.
- Admission tickets to a concert.
- NFTs representing membership or the right to unlock benefits.

107 Although as stated above they have zero intrinsic value because they are not backed by any underlying asset and they do not represent a liability on any institution.

108 The Treasury, *Token Mapping Consultation Paper* (n 4) 55.

109 *Senate Select Committee Report* (n 9) 7, [2.20], quoting FinTech Australia.

110 *Senate Select Committee Report* (n 9) 5, [2.14].

In Chapter 13 to this Report, the Board discusses NFTs further, and recommends that the Government continue to monitor and review the development and taxation treatment of NFTs.

Governance

A DLT protocol may require changes to ensure the longevity and prosperity of the network.¹¹¹ Governance is the process by which decisions in relation to these changes are made. Governance of a blockchain can be categorised into two types: ‘off-chain governance’ and ‘on-chain governance’.¹¹²

Off-chain governance

Off-chain governance refers to a process by which any changes to the protocol happen through an informal process of social discussion leading to consensus for the change and with the involvement of ‘Core Developers’ who are individuals, often sponsored by organisations.¹¹³

The governance of both the Bitcoin blockchain and the Ethereum blockchain is off-chain.¹¹⁴ Potential changes to the protocol are discussed on various online forums and at conferences. Core Developers will consider changes to the blockchain protocol proposed by others, or develop such changes themselves. If Core Developers approve a change then and consensus across all nodes (miners) is reached, the protocol is changed.¹¹⁵ The change to the public code database (i.e. the open-source software) is implemented by the Core Developers who hold the relevant electronic password for the particular code database, and then is adopted by the miners.¹¹⁶ A lack of consensus to a change (i.e. not all miners agreeing to run the updated software) can result in a ‘hard fork’ or ‘chain split’ whereby a change to the protocol creates a new version of the blockchain whilst the old version continues to operate alongside (see further below in relation to forks).

The extent to which Core Developers control the network is an issue in the UK case of Tulip Trading Limited. In that case, Tulip Trading Limited (TTL) claimed that it lost control of its cryptocurrency (bitcoin) as a result

111 [‘Introduction to Ethereum governance’](#), *Ethereum* (Web Page, 16 August 2023).

112 Philipp Kothe, [‘Governance Tokens – The New Medium Of Power?’](#), *Datarella* (Web Page, 16 March 2021), cited in Law Commission, *Decentralised autonomous organisations (DAOs) Call for evidence* (Call for Evidence, November 2022) fn 34.

113 For example, the Human Rights Foundation administers a fund to support ‘software developers who are making the Bitcoin network more private, decentralized, and resilient so that it can better serve as a financial tool for human rights activists, civil society organizations, and journalists around the world.’: [‘The Bitcoin Development Fund’](#), *Human Rights Foundation* (Web Page, accessed 27 January 2024); on 29 September 2023, global asset manager VanEck announced its intention to donate 10% of profits from its ‘VanEck Ethereum Strategy ETF’ to The Protocol Guild, which supports Ethereum core developers: VanEck ([X](#), formerly Twitter, 30 September 2023, 8.41am AEDT); [‘VanEck Ethereum Strategy ETF’](#), *Van Eck* (Web Page, accessed 18 February 2024).

114 [‘Introduction to Ethereum governance’](#), *Ethereum* (Web Page, 16 August 2023); [‘What is Bitcoin governance’](#), *Bitcoin* (Web Page, accessed 27 January 2024).

115 [‘Introduction to Ethereum governance’](#), *Ethereum* (Web Page, 16 August 2023); [‘What is Bitcoin governance’](#), *Bitcoin* (Web Page, accessed 27 January 2024).

116 *Tulip Trading Ltd (a Seychelles company) v Bitcoin Association for BSV and others* [2023] EWCA Civ 83; 4 WLR 16, [29].

of a hack that resulted in the theft of its encrypted private keys for four digital asset networks, being the Bitcoin network and/or hard forks thereof. TTL contended that the Defendants were Core Developers and/or otherwise controlled the blockchains in respect of the four digital asset networks, that the Defendants therefore owed TTL (and other bitcoin holders) fiduciary and/or tortious duties, and that accordingly the Defendants should implement a software ‘patch’ enabling TTL to regain control of its claimed bitcoin. The Defendants challenged this, contending (amongst other things) that Core Developers are ‘part of a very large, and shifting, group of contributors without an organisation or structure. Further, any change that they were able to propose to address [the complaint] would be ineffective, because miners would refuse to run it and instead would continue to run earlier versions of the software.’¹¹⁷ On successful appeal from summary judgment against TTL,¹¹⁸ the Court of Appeal of England and Wales (Birss LJ, with whom Lewison and Popplewell LJ agreed) held that there was a realistic argument to be made that the Defendants owed a fiduciary duty to TTL notwithstanding that for the claimant’s case to succeed would involve a significant development of the common law on fiduciary duties.¹¹⁹ In the course of his reasons, Birss LJ referred to a debate in academic literature as to whether the governance of blockchain is in reality decentralised, noting that some academic literature had described decentralised governance of blockchain as a ‘myth’.¹²⁰ The case of TTL is currently ongoing.

On-chain governance

On-chain governance occurs when changes are decided by a stakeholder vote, and voting happens on the blockchain.¹²¹

Stakeholders who can vote will usually be identified by their holding a ‘governance token’.¹²² Governance tokens represent a right to vote on a protocol and participate in its governance.¹²³ Governance tokens are transferable.

Other on-chain governance models are the membership model (where each member of an organisation gets assigned only one vote via a membership token which is not transferrable) and the reputation model (where one reputation token is akin to a governance token because it represents one vote, but like a membership token is not transferrable).¹²⁴

On-chain governance is often the form of governance used by Decentralised Autonomous Organizations (DAOs). A DAO is a type of organisational structure involving multiple participants online, that might rely on

117 *Tulip Trading Ltd v Bitcoin Association and others* [2022] EWHC 667 (Ch) (Falk J) [34].

118 *Tulip Trading Ltd v Bitcoin Association and others* [2022] EWHC 667 (Ch) (Falk J) [34].

119 *Tulip Trading Ltd (a Seychelles company) v Bitcoin Association for BSV and others* [2023] EWCA Civ 83; 4 WLR 16 (Lewison, Popplewell, Birss LJ).

120 *Tulip Trading Ltd (a Seychelles company) v Bitcoin Association for BSV and others* [2023] EWCA Civ 83; 4 WLR 16, [35].

121 ‘[Introduction to Ethereum governance](#)’, *Ethereum* (Web Page, 16 August 2023).

122 ‘[Introduction to Ethereum governance](#)’, *Ethereum* (Web Page, 16 August 2023).

123 Submission A26, 7.

124 Philipp Kothe, ‘[Governance Tokens – The New Medium Of Power?](#)’, *Datarella* (Web Page, 16 March 2021) cited in Law Commission, *Decentralised autonomous organisations (DAOs) Call for evidence* (Call for Evidence, November 2022) fn 34.

blockchain system, smart contracts, or other software-based systems.¹²⁵ Many DeFi (see below) and crypto-token market participants, both of which use smart contracts on existing blockchain networks, describe their organisational structures as DAOs.¹²⁶

Whilst DAOs will often utilise governance tokens, others may have more centralised governance, for example through administrative keys, which provide holders (administrators) with a backdoor to unilaterally amend and update the underlying smart contract infrastructure as they see fit.¹²⁷

Holdings of governance tokens may be largely centralised at the launch of a new platform, amongst protocol developers as well as angel investors and venture capital funds who have provided capital in order to fund the protocol's development and the creation and maintenance of user interface apps. After launch, governance tokens may be used or sold to raise additional capital on centralised crypto-asset trading platforms.¹²⁸

Transferable governance tokens can trade for significant value. 'The factors driving the economic value of governance tokens can vary. It could be driven by speculation, real economic rights and interests (e.g. distributions of fees generated by the protocol), or both.'¹²⁹ Holders of governance tokens may collectively vote to use the money earned within a DAO to reinvest in new opportunities, to pay dividends to members, or to be allocated in other ways.¹³⁰ Writing in March 2021, Philipp Kothe reported that Uniswap, a Decentralised Exchange, generates around USD 3.5 million in fees for liquidity providers of the protocol every 24 hours, and that a recent proposal suggested taking 0.005% of the 0.03% fee (or 16.7%) to distribute it to the Uniswap DAO to fund further development of the protocol. If accepted, he noted that this would give holders of Uniswap's governance token (the UNI) control over around \$600,000 a day.¹³¹

Once a protocol is deployed, its 'pathway to decentralization may include a distribution of governance tokens to early adopters (sometimes accomplished through 'airdrops'),¹³² protocol users and liquidity providers, engineers that evolve and improve the code, purchasers of the tokens in the secondary market, and third-party service providers (e.g. auditing firms) that are paid in tokens for their services.'¹³³

There is some question as to the extent to which governance tokens ensure decentralised governance, as concentrated ownership of governance tokens could result in governance being concentrated. The

125 ['Decentralised Autonomous Organisations \(DAOs\) Current Project status'](#), [UK] Law Commission (Web Page, accessed December 2023).

126 [UK] Law Commission, *Decentralised autonomous organisations (DAOs) Call for evidence* (Call for Evidence, November 2022) [1.9].

127 International Organization of Securities Commissions (IOSCO), *IOSCO Decentralized Finance Report* (Public Report OR01/2022, March 2022) 25 ('*IOSCO Decentralised Finance Report*').

128 IOSCO Decentralised Finance Report (n 127) 29.

129 IOSCO Decentralised Finance Report (n 127) 30.

130 ['What are DAOs?'](#), *Galaxy Fund Management* (Web Page, accessed 27 January 2024) cited in [UK] Law Commission, *Decentralised autonomous organisations (DAOs) Call for evidence* (Call for Evidence, November 2022) fn 35.

131 Philipp Kothe, ['Governance Tokens – The New Medium Of Power?'](#), *Datarella* (Web Page, 16 March 2021) cited in Law Commission, *Decentralised autonomous organisations (DAOs) Call for evidence* (Call for Evidence, November 2022) fn 34.

132 See below for further on airdrops.

133 IOSCO Decentralised Finance Report (n 127) 30.

International Organization of Securities Commissions (IOSCO) reported in March 2022 that in reality, for typical DeFi protocols, there continued to be central actors with concentrated ownership and voting.¹³⁴

As part of its inquiry into the potential simplification of laws that regulate financial services in Australia, in October 2022, the ALRC released a Background Paper on New Business Models, Technologies and Practices that deals with crypto assets and DAOs.¹³⁵

The UK Law Commission is currently examining the description and legal status of DAOs and in November 2022 issued a document calling for evidence to the project.¹³⁶

In Chapter 13 to this Report, the Board discusses DAOs further, and recommends that the Government continue to monitor and review the development and taxation treatment of DAOs.

Forks

There are two types of forks: a ‘hard’ fork and a ‘soft’ fork.

Hard Fork

A ‘hard fork’ in a blockchain (sometimes referred to as a ‘chain split’) results from changes to the blockchain protocol to create a new version of the blockchain whilst the old version continues to operate alongside, thus creating a new token which operates under the rules of the amended protocol while the original token continues to operate under the original network which is governed by the original protocol. Where there is a hard fork, the users who owned the cryptocurrency will be entitled to the forked cryptocurrency, without doing anything.¹³⁷

A hard fork can result from a dispute in the blockchain community as to whether a change to the blockchain should be made. Consequently, some nodes implement a change but others continue to operate the original blockchain. The result of a hard fork is that there are now two blockchains, and the original holders don’t lose any of their existing digital coin, but instead will get a unit on the new blockchain as well.¹³⁸

134 IOSCO Decentralised Finance Report (n 127) 25.

135 Australian Law Reform Commission, *Legislative Framework for Corporations and Financial Services Regulation: New Business Models, Technologies, and Practices* (Background Paper FSL7, October 2022).

136 ‘Decentralised Autonomous Organisations (DAOs) Current Project status’, [UK] Law Commission (Web Page, accessed December 2023).

137 Stefano Capaccioli, *The Crypto Series – Part I: Taxation of Cryptocurrencies* (Orbitax, 2022) 4 (‘Taxation of Cryptocurrencies’).

138 ‘Hard Forks’, *Corporate Finance Institute* (Web Page, accessed 15 January 2024).

Two examples of hard forks are:

1. The August 2017 Bitcoin hard fork which created Bitcoin Cash, resulted from a dispute as to whether the block size in the Bitcoin blockchain should be increased.¹³⁹ It has been reported that Bitcoin Cash is the most successful fork of the original Bitcoin Platform and as of June 2023 was the 28th largest digital currency by market capitalization.¹⁴⁰
2. The 2017 hard fork of the Ethereum Blockchain that resulted from a hack of 'The DAO'. The DAO was a program built on the Ethereum Blockchain that used crowd funding to create an ether investment pool valued at USD 150 million. A flaw in the coding for The DAO resulted in an unknown hacker moving 3.6 million ether (valued at around USD 50 million) into their personal account. The transferred ether was subject to a 28-day holding period and before this expired, a change in the Ethereum protocol was implemented to recover the transferred ether, resulting in the new Ethereum network. However, some in the community continued with the original blockchain, which became Ethereum Classic.¹⁴¹

Soft Fork

A 'hard fork' may be contrasted with a 'soft fork'. A soft fork also updates the protocol, however it is intended to be adopted by all users on the network. A soft fork does not reject the pre-existing rule set but continues to accept transactions created on the old rule set, and so no new coin is expected to be created.¹⁴²

Decentralised Finance (DeFi)

DeFi 'is a broad term for financial services that build on top of the decentralized foundations of blockchain technology.'¹⁴³

The goal of DeFi is to 'provide functions analogous to, and potentially beyond, those offered by traditional financial services providers, without reliance on central intermediaries or institutions'¹⁴⁴ such as banks, brokerages and clearing houses.

139 OECD, *Taxing Virtual Currencies* (n 6) 15; '[The Fork Wars: What is Bitcoin Independence Day?](#)', *Bitfinex* (Web Page, accessed 27 January 2024).

140 Katelyn Peters, '[A History of Bitcoin Hard Forks](#)', *Investopedia* (Web Page, 2 June 2023).

141 '[The DAO Attack](#)', *Deloitte* (Article, accessed 27 January 2024); '[To fork or not to fork](#)', *Deloitte* (Article, accessed 27 January 2024).

142 OECD, *Taxing Virtual Currencies* (n 6) 15; also see Katelyn Peters, '[A History of Bitcoin Hard Forks](#)', *Investopedia* (Web Page, 2 June 2023).

143 World Economic Forum in collaboration with the Wharton Blockchain and Digital Asset Project, [Decentralized Finance \(DeFi\) Policy-Maker Toolkit](#) (White Paper, June 2021) 4 ('*Decentralized Finance Toolkit*').

144 World Economic Forum, *Decentralized Finance Toolkit* (n 143) 6.

DeFi has evolved since 2015 when the Ethereum network was launched. The significant feature of the Ethereum network to DeFi is that it allows blockchain-based smart contracts (as noted above),¹⁴⁵ which in turn enable DeFi.

The OECD reports that DeFi has recorded a 50-fold increase over the year to December 2021, with the market capitalisation of stablecoins (see below) issued by the largest issuers exceeding USD 150 billion at the end of 2021.¹⁴⁶

How DeFi works

DeFi involves a multi-layered technology ‘stack’.¹⁴⁷

- At the base, or ‘settlement layer’, is the underlying blockchain. The underlying blockchain must be capable of running smart contracts (e.g. the Ethereum blockchain).
- Next is the ‘asset layer’ comprising the crypto assets (coins and tokens) that participants and smart contracts create and transfer on the blockchain. On the Ethereum blockchain, this is simply the ether on the blockchain.
- Following is the ‘smart contract layer’ which comprises multiple systems of smart contracts (and auxiliary software) that create financial products and services. These may include activities that are, or are akin to: lending, borrowing, trading and asset management activities.
- Finally is the ‘application layer’ which comprises end-user applications which will often aggregate multiple protocols to provide access and interoperability. These are currently primarily hosted off-chain and involve off-chain interfaces such as a website or mobile applications.¹⁴⁸ This ‘application layer’ involves centralised file storage and software supported by or hosted on traditional servers or cloud services. The application layer will therefore often involve centralised teams, companies and off-chain infrastructures such as web servers¹⁴⁹ (i.e. service providers and intermediaries).

However, it should be recognised that the ‘application layer’ is not essential to engage in DeFi, because the ‘application layer’ is not essential to access the smart contract layer. Users can directly interact with the smart contract by running their own node. However, the ‘application layer’ enables a user-friendly interface for the original smart contract. If an ‘application layer’ website is taken down, anyone can create a new website that enables a new user-friendly interface for the smart contract.

145 World Economic Forum, *Decentralized Finance Toolkit* (n 143) 4.

146 OECD, *Why Decentralised Finance (DeFi) Matters and the Policy Implications* (Report, 2022).

147 IOSCO Decentralised Finance Report (n 127) 3, 8.

148 IOSCO Decentralised Finance Report (n 127) 3, 8.

149 IOSCO Decentralised Finance Report (n 127) 8.

Key components of DeFi

Crypto assets

Central to DeFi are crypto assets that can be created by and/or interact with code or a smart contract and so can be used to achieve functions such as trading, lending, borrowing and other activities.¹⁵⁰

Stablecoins

Stablecoins are crypto assets that are structured to function as a stable value coin, which means that they seek to maintain a constant value relative to some asset, most commonly the US dollar or another major fiat currency but it could also be another crypto asset.¹⁵¹

Stablecoins are ‘critical to the functioning of DeFi as they are frequently used as one side of, or collateral for, a transaction.’¹⁵² More specifically and due to their perceived stability, stablecoins have become DeFi’s substitute for fiat currency, acting as the ‘stable’ leg in trading transactions involving more volatile crypto assets or as ‘collateral’ for lending and borrowing. For example, a user can convert USD to a fiat-based stablecoin through a centralised crypto asset trading platform and then use the fiat-based stablecoin to participate in DeFi activities.¹⁵³

Stablecoins can be organised into three categories:¹⁵⁴

- **Custodial stablecoins** which are backed by centralised reserves of fiat currencies (fiat-backed stablecoins) or highly liquid physical assets such as gold (commodity-backed stablecoins). As there is a centralised reserve, custodial stablecoins are not DeFi services themselves although they may be used in DeFi.
- **Asset-backed stablecoins** which are pegged to and backed by other cryptocurrencies or other assets by the use of smart contracts.
- **Algorithmic stablecoins** which attempt to maintain relative value through dynamic expansion and contraction of token supply.

Stablecoins may be created by processes including ‘bridging’ and ‘wrapping’.

150 IOSCO Decentralised Finance Report (n 127) 10.

151 Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 8, which also indicates that stable coins can seek to maintain a constant value relative to other real-world assets such as securities, commodities, derivatives, or real estate. However, the Board understands that it is less common that such a token would be referred to as a stablecoin.

152 IOSCO Decentralised Finance Report (n 127) 10.

153 IOSCO Decentralised Finance Report (n 127) 16-18.

154 World Economic Forum, *Decentralized Finance Toolkit* (n 143) 10; Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 9.

Bridging

Bridging was described to the Board as the ‘connection of two blockchains through a blockchain bridge or cross-chain bridge that allows interoperability between networks that are potentially vastly different (for example Bitcoin and Ethereum) and between a parent blockchain and its child chain (side chain). Bridges allow users to transfer information and assets from one chain to another. This may include the transfer of tokens, data, and smart contract instructions.’¹⁵⁵

‘Bridging generally involves locking a coin or token from one blockchain into a smart contract, which then creates a derivative asset on another blockchain.’¹⁵⁶ Bridges are either custodial (also known as centralised or trusted) or noncustodial (decentralised or trustless), in which case the original assets are held (or ‘locked’) by the protocol.¹⁵⁷

One type of stablecoin created by bridging is ‘Wrapped Bitcoin’, which is a stablecoin backed by bitcoin issued on the Ethereum blockchain, thus enabling holders of bitcoin to access smart contract functionality on the Ethereum blockchain. It is a custodial token with all Wrapped Bitcoin held in custody by BitGo, which is a company headquartered in California.¹⁵⁸ To acquire Wrapped Bitcoin, an owner of bitcoin wraps their own bitcoin by finding a Wrapped Bitcoin merchant (such as DeversiFi, Kyber or Ren) which sends the bitcoin to the custodian (i.e. BitGo) who mints new Wrapped Bitcoin at a 1:1 ratio and stores the deposited bitcoin. When the owner wants to redeem their Wrapped Bitcoin for bitcoin, the merchant will send a burn request to the custodian who will then destroy the Wrapped Bitcoin and return the bitcoin back to the owner.

Wrapping

The Board was told that ‘A wrapping contract is similar to a bridging contract, however the ‘wrapped’ token that is created is usually issued on the same blockchain.’¹⁵⁹ By contrast, it was also indicated to the Board that ‘wrapping/wrapped tokens’ involve ‘smart contracts on a blockchain that hold the value of a token on a different blockchain network that has been locked to serve as collateral. This enables holders to use such tokens for DeFi activities on a different blockchain.’¹⁶⁰

155 Submission A33, 39. For completeness: a ‘side chain’ is a separate, independent blockchain linked to the main blockchain (also referred to as parent blockchain or mainnet) using a two-way bridge. A sidechain can be public or private, and each side chain has its own token, protocol, consensus mechanism, and security. Sidechains can be used to run blockchain applications like decentralised apps (DApps), taking some computational load off the mainchain and helping to scale the blockchain. Sidechains were first mentioned by Dr Adam Back in his paper ‘Enabling Blockchain Innovations with Pegged Sidechains’ (22 October 2014). A typical sidechain implementation creates a transaction on the first blockchain (the main chain) by locking the assets, then creates a transaction on the second blockchain (the sidechain) and provides cryptographic proofs to the transaction that the assets were locked correctly on the first blockchain. ‘What are Sidechains? Scaling Blockchain on the Side’, *crypto.com* (Web Page, 4 February 2021); Stephan Roth, ‘An Introduction to Sidechains’, *Coindesk* (Web Page, 12 May 2023).

156 Submission A19, 24.

157 Robert Stevens, ‘What are Blockchain Bridges and How Do They Work?’, *Coindesk* (Web Page, 12 May 2023).

158 ‘About Us’, *BitGo* (Web Page, accessed 27 January 2024).

159 Submission A19, 25.

160 Submission A33, 42.

Having regard to the foregoing, the Board notes that:

- the term ‘wrapped’ is often used to describe bridged crypto assets as well as wrapped assets on the same blockchain as the original assets
- the industry has not standardised the terminology in this regard
- there were discrepancies in the use of terminology amongst submissions to the Board.¹⁶¹

The Board suggests that the correct reflection of general industry understanding may be that wrapped tokens arise from wrapping tokens on either the same blockchain or different blockchains, that wrapping tokens across different blockchains involves bridging, and that bridging may have uses apart from wrapping. Regardless of the terminology, it would seem that bridging and wrapping are similar in that they both involve locking or providing one token in return for another with different functionality, although there may be different arrangements within each, particularly noting the difference between custodial and non-custodial arrangements.

An example of a wrapped token on the same blockchain is ‘Wrapped Ether’. Whilst ether is the cryptocurrency native to the Ethereum blockchain and the Ethereum network enables smart contracts which are foundational to DeFi, the native currency to the Ethereum network (i.e. ether) pre-dated the development of ERC-20 which is the community-based standard for tokens that smart contracts are designed to handle, and therefore ether is not ERC-20 compatible. Accordingly, a smart contract was written that ‘envelopes ETH [ether] in an ERC-20 wrapper so that any DApp [decentralised application] with ERC-20 support can effectively support ETH.’¹⁶² Wrapped Ether is exchanged at a 1:1 ratio with ether and enables holders of ether to access ERC-20 compatible DApps without having to dispose of their ether.¹⁶³ ‘Unlike [Wrapped Bitcoin], you don’t actually ‘wrap’ [ether] at all. To acquire it, you simply trade [ether] for [Wrapped Ether] through a smart contract, or on a digital wallet like MetaMask.’¹⁶⁴

Exchanges

Exchanges allow users to trade one digital asset for another, or for fiat currency.¹⁶⁵ There are two types of exchanges: Decentralised Exchanges and Centralised Exchanges.

‘Decentralised Exchanges’ (DEX) are DeFi services because they do not take custody of user funds but allow buyers and sellers to transact in digital tokens using smart contracts on a platform such as Ethereum. The

161 Submission A19, 25, fn 11, which largely made this point.

162 ‘What is WETH?’, *Bitcoin.com* (Web Page, accessed 27 January 2024).

163 Submission A10, 7; Submission A33, 42; Submission A37, 9; IOSCO Decentralised Finance Report (n 127) 6, 13; ‘What is WETH?’, *Bitcoin.com* (Web Page, accessed 27 January 2024); Nathan Reiff, ‘What Crypto Users Need to Know: the ERC20 Standard’, *Investopedia* (Web Page, 21 December 2023); Liz Merin, ‘Wrapping vs. Swapping vs. Bridging: An intro to crypto facelift’, *Accubits* (Blog, 22 November 2022); ‘A beginner’s guide to understanding wrapped tokens and wrapped Bitcoin’, *Cointelegraph* (Web Page, accessed 27 January 2024); Noah Fields, ‘Wrapped Tokens: Bridging the Blockchain Space’, *Komodo* (Web Page, 31 August 2023).

164 Robert Stevens, ‘What are Wrapped Tokens’, *CoinDesk* (Web Page, 12 May 2023).

165 OECD, *Taxing Virtual Currencies* (n 6) 14.

DEX avoids taking custody of user's digital assets, and instead manages trades through the following mechanisms:¹⁶⁶

- An order book managed by a centralised operator who does not take custody of any assets, but relays the information necessary for the trade to be executed and settled on the blockchain between the 'makers' (who want to buy or sell a particular crypto asset at a certain price) and the 'takers' (who match the maker's order). These are called 'order book exchanges' and the operator collects fees from makers and takers for providing this service. Takers typically also pay a protocol fee on each trade, a portion of which may go to makers to reward them for providing liquidity.¹⁶⁷
- An entirely on-chain order book where the information necessary for the trade to be executed and settled on the blockchain is relayed between the makers and the takers by a smart contract which executes the trade. Such decentralised order books are becoming more common as the technology improves, and have the perceived advantage of transparency as the code for the execution of the smart contract is publicly available. These are called 'decentralised order book exchanges' and the smart contract collects fees from makers and takers and also, typically, protocol fees.
- 'Automated market makers' (AMMs) which exist entirely on-chain and involve participants depositing two or more crypto assets into a 'liquidity pool' which is then available for trading. Participants receive a crypto asset that represents their pro rata interest in the liquidity pool and is redeemable at any time for their share of the pool, including accrued trading fees. The activity of depositing crypto assets into a 'liquidity pool' in return for rewards (arising from trading fees) is referred to as 'liquidity mining'.¹⁶⁸ An example of a decentralised platform that uses AMMs is Uniswap.¹⁶⁹

DEX contrasts with 'centralised exchanges' which hold tokens in their custody,¹⁷⁰ such as Coinbase and Kraken.¹⁷¹ The NZ case of *Ruscoe v Cryptopia Limited (in liquidation)*¹⁷² was concerned with the liquidation of a centralised cryptocurrency exchange which was placed in liquidation following a hack. The liquidators sought assistance from the NZ High Court in relation to the distribution of the crypto assets held by the exchange. The NZ High Court held that the crypto assets were property and that, based on the terms of service of the relevant exchange, the exchange held each cryptocurrency on bare trust for the accountholders with holdings in that cryptocurrency.

As can be seen from the case of *Ruscoe v Cryptopia*, the legal rights (and therefore tax treatment) applying to crypto assets bought, sold and held by exchanges will be affected by the terms of the contract between the particular exchange and their customers. The pro-forma contracts that Australian digital asset platforms, including crypto exchanges, offer to enter into with prospective customers are publicly available on their

166 Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 8; IOSCO Decentralised Finance Report (n 127) 14-15.

167 Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 8; IOSCO Decentralised Finance Report (n 127) 14-15.

168 Marko Mihajlovic, '[What is Liquidity Mining](#)', *Shrimpy Academy* (Web Page, 8 May 2023); Anders Bylund, '[What is Liquidity Mining?](#)', *The Motley Fool* (Web Page, 20 November 2023).

169 Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 8; IOSCO Decentralised Finance Report (n 127) 14-15.

170 World Economic Forum, *Decentralized Finance Toolkit* (n 143) 10.

171 OECD, *Taxing Virtual Currencies* (n 6) 14; Capaccioli, *Taxation of Cryptocurrencies* (n 137) 6; '[What does Coinbase do with my digital assets](#)', *Coinbase* (Web Page, accessed 27 January 2024); '[What are custodial and non-custodial crypto wallets](#)', *Kraken* (Web Page, accessed 27 January 2024).

172 *Ruscoe v Cryptopia Limited (in liq)* [2020] NZHC 728; [2020] 2 NZLR 809 (Gendall J).

websites. The Board has undertaken an analysis of these publicly-available pro-forma contracts and an overview of the general terms of those contracts is contained in **Appendix B** to this Report.

Over-The-Counter Desks

An alternative to trading crypto assets via an exchange, is trading crypto assets via an over-the-counter (OTC) desk. OTC trading refers to a private trading market for buying and selling crypto which requires the involvement of a third-party intermediary (OTC broker or ‘desk’) who will either be the principal with whom the buyer/seller transacts (Principal Desks) or will act as their agent in the transaction (Agency Desks). Crypto OTC trading is relatively opaque since no one beyond the transacting parties is aware of the price and volume of assets being traded. OTC desks may be used by high-volume traders, institutions, private wealth managers and hedge funds. OTC desks enable large investors, such as early adopters, high-net-worth individuals, and institutional investors, to buy and sell large amounts of cryptocurrencies without alerting the market about their intention or transaction.¹⁷³

Oracles

DeFi protocols may require information that does not exist on the blockchain (e.g. crypto asset’s market price on a centralised crypto asset trading platform, or the occurrence of an event such as the outcome of a sporting competition). ‘Oracle’ is the name given to a mechanism that connects a smart contract to off-chain data.¹⁷⁴

Digital Wallets

Digital wallets are software interfaces for users to manage assets stored on a blockchain. A crypto wallet has a blockchain-specific wallet address that allows for the sending and receiving of crypto.¹⁷⁵ A wallet enables cryptocurrency to be managed through private keys, public keys and public addresses.¹⁷⁶

Wallets can be custodial wallets, or non-custodial wallets.¹⁷⁷

173 [‘What is Crypto OTC Trading and How Does it Work’, Yellow Card](#) (Web Page, 15 January 2024); Capaccioli, *Taxation of Cryptocurrencies* (n 137).6; Laura Sin, [‘What Are Crypto OTC Desks and How Do They Work?’](#), *Coindesk* (Web Page, 12 January 2024).

174 Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 3.

175 Submission A07, 10.

176 Capaccioli, *Taxation of Cryptocurrencies* (n 137).5. Capaccioli further says ‘The International Standard Organization (ISO 22739:2020) defined “3.84 wallet: application used to generate, manage, store or use private (3.62) and public keys (3.65) Note: A wallet can be implemented as a software or hardware module” and National Institute of Standard and Technology (NIST-NISTIR 8301) “Wallet [20] An application used to generate, manage, store or use private and public keys. A wallet can be implemented as a software or hardware module”’.

177 Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 2.

- With a ‘custodial wallet’, private keys are managed by a service provider. In short, a custodial wallet is an internal account maintained by a service provider (i.e. it does not record private keys or sign messages).¹⁷⁸ In the custodial wallet ‘the keys are kept by the service wallet provider, and under some circumstances (and in some countries) the cryptocurrencies are ‘deposited’’.¹⁷⁹ Another term for a custodial wallet is the ‘centralised crypto wallet’ which is ‘provided for an individual or organisation as part of a service offered by a centralised crypto exchange’.¹⁸⁰
- With a ‘non-custodial wallet’, the user has exclusive control of their cryptocurrency through their private keys. In short, a non-custodial crypto wallet ‘is a wallet where only the holder possesses and fully controls the private keys. Since there are no intermediaries, the users can trade crypto directly from their wallets.’¹⁸¹ Another term for a non-custodial wallet is the ‘Decentralised Crypto Wallet’ which is ‘a crypto wallet that facilitates the independent custody of an organisation or individual’s cryptocurrency that are not linked to a centralised exchange.’¹⁸²

All custodial and non-custodial wallets are either cold wallets (offline) or hot wallets (online).¹⁸³

- A ‘cold wallet’ is a record of a private key that has not been exposed to an internet-connected computer (e.g. a piece of paper).
- A ‘hot wallet’ is a record of a private key that is (or has been) exposed to an internet-connected computer (e.g. a software application).¹⁸⁴

DeFi Activities

As indicated above, DeFi activities may include activities that are, or are akin to, lending, borrowing, trading, and asset management activities.

In June 2021, the World Economic Forum in collaboration with the Wharton Blockchain and Digital Asset Project, identified the following six major DeFi service categories: stablecoins; exchanges; credit; derivatives; insurance; and asset management.¹⁸⁵

In March 2022, the IOSCO identified various DeFi Products and Services including Lending and Borrowing; Derivatives/Synthetics; Trading; Insurance or Risk Protection; and Asset Management and Advisory Activity.¹⁸⁶ In explaining these Products and Services, IOSCO stated that ‘it is important to recognize that DeFi does not exist wholly independent of traditional financial markets and entities (referred to as ‘Tradfi’

178 The Treasury, *Token Mapping Consultation Paper* (n 4) [151].

179 Capaccioli, *Taxation of Cryptocurrencies* (n 137).5.

180 Submission A07, 10.

181 Capaccioli, *Taxation of Cryptocurrencies* (n 137).5.

182 Submission A07, 10.

183 Submission A07, 10; Siyu Ren Heinrich, ‘[Custodial Wallets vs Self-Custody Wallets – which Crypto Wallet is Best?](#)’, *tastycrypto* (Web Page, 15 July 2023).

184 The Treasury, *Token Mapping Consultation Paper* (n 4) [151].

185 World Economic Forum, *Decentralized Finance Toolkit* (n 143) 10; also see Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 8.

186 IOSCO Decentralised Finance Report (n 127).

for the purposes of this Report) and centralized crypto asset markets and entities (referred to as ‘CeFi’ for the purposes of this Report) and there are important interlinkages.’¹⁸⁷

Lending and Borrowing

Lending protocols allow holders of crypto assets (often stablecoins) to earn a fixed or variable return on those assets by depositing them in a smart contract or ‘lending pool’ that allows other participants to borrow those assets. Interest rates can vary and are set by algorithms, a protocol project team, or through voting by those holding governance tokens.¹⁸⁸ Interest rates will often increase as borrowing levels approach and then exceed the optimal ‘utilisation rate’ (being the rate of borrowing compared with assets in the lending pool).¹⁸⁹

Borrowers will usually provide collateral the value and volatility of which will affect the amount that can be borrowed.¹⁹⁰ If a loan-to-value ratio exceeds a ‘liquidation ratio’, the borrower must either deposit more collateral or repay the loan in part or in full, or risk liquidation which involves the supplied collateral being sold at a discount to cover the loan either fully or partially (i.e. to the extent required until the point is reached where the loan is sufficiently collateralised which occurs when the loan-to-value ratio no longer exceeds the liquidation ratio). In this type of protocol, a third-party acquires a portion of the crypto assets backing the loan in exchange for the borrowed crypto assets.¹⁹¹ Liquidation may also require the borrower to pay a liquidation fee which would ordinarily be a percentage of the collateral sold.

Lending protocols may distribute governance tokens in exchange for participation in these arrangements, which may act as an incentive for borrowers to re-deposit borrowed funds as collateral for further borrowings (a ‘borrowing spiral’) in order to obtain more governance tokens.¹⁹²

‘Flash loans’ do not require collateral because the crypto assets are borrowed and repaid (with a small fee or interest) within the same block of transactions on the blockchain and if the repayment does not occur, the borrowing is automatically cancelled. As there is no risk to the lender, the interest rate is low.¹⁹³ Flash loans are used for various purposes including arbitrage (i.e. generating profit by trading in an asset that has different exchange rates on different markets) and liquidations, but they can also be used to exploit vulnerabilities in DeFi protocols.¹⁹⁴

187 IOSCO Decentralised Finance Report (n 127) 8-9.

188 IOSCO Decentralised Finance Report (n 127) 11.

189 IOSCO Decentralised Finance Report (n 127) 11.

190 IOSCO Decentralised Finance Report (n 127) 11.

191 IOSCO Decentralised Finance Report (n 127) 11.

192 IOSCO Decentralised Finance Report (n 127) 11.

193 IOSCO Decentralised Finance Report (n 127) 11.

194 ‘[What are Flash Loans?](#)’, *Chainlink* (Web Page, 24 May 2023). One example of the exploitation of a vulnerability in a protocol was the hack of The DAO which occurred in 2017 (see ‘Forks’ above).

Derivatives/Synthetics

Derivatives are synthetic financial instruments whose value is based on a function of an underlying asset or group of assets. Common examples are futures and options, which reference the value of an asset at some time in the future.¹⁹⁵

DeFi protocols can allow participants to create synthetic crypto assets whose value derives from the value of an underlying reference asset ('asset-based' synthetic crypto assets), such as stablecoins – see above) or the outcome or occurrence of some event ('event-based' synthetic crypto assets). For example:¹⁹⁶

- A synthetic crypto asset whose value tracks the price performance of ether relative to bitcoin, such that any increase in the price of ether relative to bitcoin would increase the value of the synthetic crypto asset. The creator of the synthetic crypto asset usually must deposit collateral in an amount greater than the value of the reference asset, and often sells the synthetic crypto asset to others. The synthetic crypto asset is typically redeemable for the collateral that was used to create it.
- Bridged or wrapped tokens, which are types of stablecoins (see above).

There are also derivative DeFi protocols that are 'economically the same as or similar to traditional derivatives such as options, swaps, and more complex structured products'.¹⁹⁷

DeFi derivatives are very flexible: they could create a synthetic asset that behaves as a stock, commodity, swap or another digital asset; they could involve an NFT; or they could be tied to the activity of a business or creating a crowdfunding service.¹⁹⁸

Trading

Trading in crypto assets occurs on Exchanges or OTC Desks (see above).

Traders may use algorithms¹⁹⁹ which are specialised software that allows for automated, and often high-speed, trading – 'often by sophisticated, well-capitalized entities'. Algorithms may be used to 'automate trading decisions based on certain pre-determined triggers. Algorithms run various trading strategies or identify arbitrage opportunities. By exploiting arbitrage opportunities, Algorithms allow protocols to adapt to the market.

Automated market makers (AMMs – see 'Exchanges' above) rely on 'bot' arbitrage to adjust the AMM pool's holdings (and so its trading price) if the smart contract deviates from market prices.²⁰⁰

'Aggregators' are other software-based products that enable various trading activities. They scan across protocols to identify and implement transactions to optimise liquidity or yield-generating opportunities for

195 Wharton Blockchain, DeFi Beyond the Hype (n 12) 8.

196 IOSCO Decentralised Finance Report (n 127) 13.

197 IOSCO Decentralised Finance Report (n 127) 13.

198 World Economic Forum, Decentralized Finance Toolkit (n 143) 11.

199 Sometimes referred to as 'Bots'.

200 IOSCO Decentralised Finance Report (n 127) 15.

their users. DEX aggregators scan a range of trading protocols for the purpose of finding the best terms for a trade (including the trading price, trading fee and ‘slippage’ – i.e. the probability that the deal terms will change over time). Aggregators may charge a fee for their service, which is added to the fees otherwise charged by the protocols for the trade that occurs.²⁰¹

Insurance or Risk Protection

Investors may obtain protection against a certain event (e.g. the hack or failure of a particular DeFi protocol or centralised trading platform or a stablecoin price crash) in exchange for a fee (or premium) which goes to the participants who assume the risk of the event by depositing crypto assets in a shared risk pool. Although likened to insurance, the smart contracts that underly these transactions are essentially shared risk pools that offer and sell event contracts²⁰² (see derivatives and synthetics above).

Asset Management and Advisory Activity

DeFi asset-management and advisory arrangements can take various forms.²⁰³

In some cases, smart contracts can automate investment strategies for investors’ pooled assets (currently these are crypto assets including crypto assets that provide derivative/synthetic exposure to real world assets, but tokenised real-world securities and assets could also be included). The DeFi protocols set the parameters such as fees, asset weighting, asset types and number of positions. The protocols use algorithms to ensure the pool meets the investment objectives and parameters. Investors can receive a separate token which can be used for governance votes and that can be used to pay transaction costs or management fees. Other investors can invest in the pool, typically through a website interface to the protocol. In some cases, invested crypto assets remain within the wallet of the investor, negating the need for a third-party custodian.

In other cases, investment decision-making for the DeFi asset pool can be put in the hands of an entity that acts as a portfolio manager and has discretion over investments.

Some protocols operate to pool investors’ crypto assets for trading, lending and borrowing purposes, to attain a greater yield (‘yield farming’ aggregators or pools). Yield farming aggregators or pools can constantly rebalance in accordance with strategies coded into smart contracts. Participants deposit crypto assets in the associated yield farming protocol and receive a crypto asset representing their pro rata share of the asset management pool, which is redeemable at any time. Yield farming aggregators or pools use smart contracts, however the creators or developers of these smart contracts often retain the ability to modify the smart contracts and algorithms.

201 IOSCO Decentralised Finance Report (n 127) 15–16.

202 IOSCO Decentralised Finance Report (n 127) 20–21; Also see World Economic Forum, Decentralized Finance Toolkit (n 143) 11.

203 The following is largely based on IOSCO Decentralised Finance Report (n 127) 21–22.

DeFi asset management has been said to promise ‘greater transparency and efficiency in constructing and executing investment strategies, by incorporating the asset management life cycle into a DApp [decentralised application].’²⁰⁴

Returns available from holdings of crypto assets

From the above, it can be seen that holders of crypto assets can exploit those assets in various ways in order to obtain returns. For example:²⁰⁵

- Investors can contribute their crypto assets to lending pools in return for interest (which has been referred to as a type of ‘lock-up yield’).²⁰⁶ See ‘Lending and Borrowing’ above.
- ‘Liquidity mining’ where investors deposit crypto assets into a decentralised order book exchange or AMM liquidity pool for the purpose of facilitating trading, in return for a crypto asset that represents their pro rata interest in the liquidity pool, and which is redeemable at any time for their share of the pool including accrued trading fees. See ‘Exchanges’ above.
- ‘Yield farming’ which optimises returns from activities including lock-up yields and liquidity mining by constantly rebalancing the use of crypto assets. Yield farming typically involves changing participation in various DeFi protocols to attain a higher yield. ‘While participants can engage in yield-farming independently, they often use yield-farming aggregators or pools as they can earn yields that likely would not otherwise be attainable independently.’²⁰⁷ See ‘Asset Management and Advisory Activity’ above.
- Staking (in the case of a proof-of-stake protocol).

‘Airdrops’ may also be distributed on the basis of holdings of crypto assets (see ‘Airdrops’ below).

Other Crypto Transactions

Airdrops

An airdrop is ‘a distribution of a cryptocurrency or token in a manner that requires no or very little effort from the recipient and involves no exchange of tangible consideration in the form of fiat or other cryptocurrencies.’²⁰⁸

There are broadly two general categories of tokens that are distributed in an airdrop:

204 World Economic Forum, *Decentralized Finance Toolkit* (n 143) 11.

205 World Economic Forum, *Decentralized Finance Toolkit* (n 143) 10; Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 6.

206 World Economic Forum, *Decentralized Finance Toolkit* (n 143) 10; Wharton Blockchain, *DeFi Beyond the Hype* (n 12) 6.

207 IOSCO Decentralised Finance Report (n 127) 21.

208 Carol R Goforth, ‘It’s Raining Crypto: The Need for Regulatory Clarification When it Comes to Airdrops’ (2019) 15(2) *Indian Journal of Law and Technology* 324, quoted in Allen, Berg and Lane (2023) (n 105).3; Also Submission A10, 8.

1. Cryptocurrency tokens that natively form part of the consensus mechanism of the underlying blockchain, which are also referred to as the cryptocurrency that is native to a particular blockchain (such as bitcoin for the Bitcoin blockchain and ether for the Ethereum blockchain).
2. Tokens that are created as smart contracts on top of smart contract-capable blockchains.²⁰⁹

Allen, Berg and Lane have analysed a diverse selection of high-profile airdrops as case studies and from these have identified two dominant rationales for airdrops: marketing and decentralisation.²¹⁰ They identify that airdrops have some parallels with some common business practices and strategies in sharing economy businesses that match buyers and sellers and rely on network effects for their value, such as the ride-sharing service Uber. In this context, they observe that Uber spent USD 2 billion on incentives in 2015 alone.²¹¹ In short, airdrops can incentivise engagement in the protocol. Airdrops can, for example, be used to overcome the ‘cold start problem’ of a new project. Allen, Berg and Lane also observe that an airdrop is a common method used to allocate governance tokens²¹² which, as indicated above, can be undertaken as a ‘pathway to decentralisation’.²¹³

Some types of airdrops include:²¹⁴

- Standard Airdrop, where participants interested in receiving an airdrop simply create an account and offer their wallet address.
- Bounty Airdrop, where users receive the airdrop for performing certain simple tasks such as posting on social media, tagging the company, retweeting a recent tweet about the project, signing up for a newsletter or following social media channels.
- Holder Airdrop, which occurs automatically based on who is holding existing tokens and how many tokens they hold – the tokens are simply dropped into their wallet. This is possible because wallets and blockchain information are part of a publicly distributed ledger which gives full transparency into the wallets and distribution of tokens. Notably, recipients of holder airdrops may not have wanted an airdrop.
- Exclusive Airdrop, which occurs when specific people are individually selected for the airdrop, not on the basis of the number of tokens they hold but on other bases such as being an early participant in, or supporter of, a crypto or blockchain project. These might be based on time spent on a project or number of posts in a forum, or rewards for those closest to the project such as first users who have had a strong connection with the project since its early days.

209 Allen, Berg and Lane (2023) (n 105) 4–5.

210 Allen, Berg and Lane (2023) (n 105) 4.

211 Allen, Berg and Lane (2023) (n 105) 2–3 and the citations therein.

212 Allen, Berg and Lane (2023) (n 105) 7.

213 IOSCO Decentralised Finance Report (n 127) 30.

214 James Howell, ‘[Crypto Airdrop A Definitive Guide](#)’, *101 Blockchains* (Web Page, 16 September 2022); Jake Frankenfield, ‘[Cryptocurrency Airdrop: What Is It and How Does It Work](#)’, *Investopedia* (Web Page, 13 September 2022); Submission A09, 19.

Initial Coin Offerings

Initial Coin Offerings (ICOs) (also known as Initial Token Offerings or ITOs) involve the issuance of a new token, often in exchange for one of the major virtual currencies (such as bitcoin) or, in some cases, fiat currency. The tokens may be new cryptocurrencies native to a new blockchain, or project-specific tokens which 'would be marketed as offering some form of utility within the project, granting ICO investors early-access to the protocols upon launch.' ICOs have been described as 'crypto-focused crowdfunding on a global scale'.²¹⁵

An example of an ICO involving a cryptocurrency is the Ethereum ICO which raised initial funding from a July 2014 ICO, exchanging the first 60 million ether for USD 18.3 million of bitcoin.²¹⁶ Notwithstanding that this example of an ICO involving cryptocurrency, the OECD has reported that the majority of ICOs up to 2020 involved the issuance of utility tokens (such as governance tokens), rather than security tokens or virtual currencies.²¹⁷

There was a boom in ICOs in 2017, which raised USD 550 million and USD 300 million in June and July 2017 respectively (compared with traditional venture capital raising of USD 200 million in July 2017). Crypto research firm TokenData reported cumulative ICO funding between January 2017 and July 2018 at USD 17.8 billion. This ICO boom ultimately collapsed for a number of reasons including many fraudulent projects, a general decline in crypto investment, and the US Securities and Exchange Commission and other national agencies in regulating ICOs.²¹⁸

Gaming Finance (GameFi)

Gaming Finance (GameFi) is a relatively new concept which:

combines the elements of gaming and decentralized finance. It represents a new category of decentralised applications (dApps) that aims to merge the gaming and blockchain worlds.

It does so by creating a gaming ecosystem that utilizes blockchain technology, digital assets and decentralized finance to enhance player experience and monetization opportunities.

The core idea behind GameFi is to provide players with ways to earn token rewards and assets for gaming achievements and skills. GameFi has been the catalyst behind a new subset of gaming experiences commonly referred to as play-to-earn [P2E] games.²¹⁹

215 ['Comparing the ICO Boom of 2017/18 and the NFT Boom of 2021'](#), *NFT Tech* (Web Page, 11 January 2022).

216 ['Comparing the ICO Boom of 2017/18 and the NFT Boom of 2021'](#), *NFT Tech* (Web Page, 11 January 2022).

217 OECD, *Taxing Virtual Currencies* (n 6) 13.

218 ['Comparing the ICO Boom of 2017/18 and the NFT Boom of 2021'](#), *NFT Tech* (Web Page, 11 January 2022); OECD, *Taxing Virtual Currencies* (n 6) 13.

219 ['What is GameFi'](#), *LimeChain* (Web Page, 13 June 2023).

GameFi has been explained as working in the following fashion:

A gamer buys an NFT to use the platform, plays the game and wins gaming tokens. These gaming tokens can be converted into Bitcoin, Ethereum, fiat currency or stablecoins. NFTs used to play the games can be upgraded as the players get better at the game. These NFTs can be sold on NFT marketplaces for a higher price as they are now upgraded.²²⁰

GameFi NFTs can be used as surety for DeFi lending protocols and are permissible for staking, liquidity mining and yield farming.²²¹

The Metaverse

Gaming takes place in what is sometimes referred to as the 'Metaverse'. Whilst there is no universally accepted definition of the 'Metaverse', it has been described as 'a place parallel to the physical world, where you spend your digital life. A place where you and other people have an avatar, and you interact with them through their avatars.'²²² Essayist Matthew Ball is regularly cited in relation to the operation of the Metaverse and he provides the following description:

The Metaverse is a massively scaled and interoperable network of real-time rendered 3D virtual worlds and environments which can be experienced synchronously and persistently by an effectively unlimited number of users with an individual sense of presence, and with continuity of data, such as identity, history, entitlements, objects, communications, and payments.²²³

In relation to the Metaverse, Koinly wrote:

... Web 3 and Metaverse technologies are in their infancy, with no clear picture to retail investors as to how individuals, corporations and governments will operate within these ecosystems.

What is clear, however, is that such technologies are already being tested, used and developed, with capital flows to the crypto asset sector set to increase.²²⁴

McKinsey & Company describes the metaverse as 'the emerging 3-D enabled digital space that uses virtual reality, augmented reality, and other advanced internet and semiconductor technology to allow people to have lifelike personal and business experiences online' and in 2022 estimated that 'the metaverse has the potential to generate up to \$5 trillion in value by 2030'.²²⁵

220 ['A beginner's guide to the GameFi ecosystem'](#), *Cointelegraph* (Web Page, accessed 12 January 2024).

221 ['What is GameFi – and how could crypto regulations shape it?'](#), *World Economic Forum* (Web Page, 23 November 2022).

222 Shamani Joshi, ['What is the Metaverse? An Explanation for People Who Don't Get it'](#), *Vice* (Web Page, 15 March 2022).

223 Matthew Ball, ['Framework for the Metaverse'](#), *MatthewBall.co* (Essay, 29 June 2021).

224 Submission A10, 20.

225 ['What is the metaverse'](#), *McKinsey & Company* (Web Page, 17 August 2022).

Forbes reports that Tim Sweeney (CEO of videogame company Epic Games) has stated ‘over the coming decades, the metaverse has the potential to become a multitrillion-dollar part of the world economy’.²²⁶

In Chapter 13 to this Report, the Board discusses GameFi and the Metaverse further, and recommends that the Government continue to monitor and review the development and taxation treatment of GameFi and the Metaverse.

Regulating digital asset platforms

Notwithstanding that the original purpose of DLT was to enable peer-to-peer transactions, as can be seen from the foregoing discussion there has been significant growth in intermediaries in the digital asset ecosystem, particularly with the development and growth of DeFi.

The Australian Government has said that ‘Intermediaries in the digital asset ecosystem are almost universally structured as digital asset platforms. This includes all the dominant players in the digital assets market, both in the volume of transactions they process and the size of the customer base they serve. It also appears to include most ‘brokers’ and even intermediaries holding non-digital assets as part of an ‘asset-backed token’ arrangement.’²²⁷

The Australian Government has recognised that recent failures of digital asset platforms have led to considerable consumer losses and has said that the failures of digital asset platforms ‘are symptomatic of unregulated asset holding intermediaries’.²²⁸

Accordingly, the Australian Government has indicated that it ‘intends to introduce a regulatory framework aimed at addressing the significant risks and potential harms associated with digital asset platforms [which] proposes to regulate digital asset platforms within the existing Australian financial services laws.’²²⁹

Observation 3.2

The Board observes that the crypto ecosystem is complex and evolving quickly due to technological change and financial innovation, with the growth of DeFi acting as a peer-to-peer alternative to traditional finance adding further complexity and ongoing innovation. Consideration of taxation issues relating to the crypto ecosystem should be ongoing as the crypto ecosystem, and global taxation responses to it, continue to develop.

In the meantime, Australian taxpayers require clarity and certainty in relation to the application of the current tax laws so that they can ensure that their tax disclosures will be acceptable to the ATO.

226 Steven Ehrlich, ‘[The Metaverse Explained](#)’, *Forbes* (Web Page, 10 March 2023).

227 The Treasury, *Regulating Digital Asset Platforms* (n 10) 3.

228 The Treasury, *Regulating Digital Asset Platforms* (n 10) 4.

229 The Treasury, *Regulating Digital Asset Platforms* (n 10) 4.

Chapter 4: Classification and Nature of Digital Assets

Key Points

- Different crypto assets may be classified by the features, rights and obligations inherent to them.
- One basis of classification is whether the crypto assets are linked to conventional 'off-chain' assets (such as contractual rights to attend a concert) or have value in and of themselves, without any link to conventional assets (the 'native' or 'on-chain' assets, such as cryptocurrencies).
- A crucial issue for the taxation of digital assets is whether digital assets are property.
- Legislation passed in 2023 provided certainty to taxpayers in relation cryptocurrencies not being treated as foreign currency for tax purposes.
- A number of potential environmental, criminal and financial risks and concerns have been raised in relation to the crypto ecosystem and these may be relevant to any governmental policy considerations.

Introduction

In this chapter the Board has considered the various classifications that may apply to crypto assets. The first part of this chapter sets out the relevant regulatory classifications, with reference to:

- payment, utility and security classifications
- financial, debt or equity classification
- classifications on the basis of a link to conventional assets.

In the second part of the chapter, the Board has considered classifications with specific relevance for tax purposes, including whether a crypto asset may be appropriately classified as property, and the Government's recent legislative amendment to ensure that cryptocurrencies such as bitcoin are not treated as foreign currency for Australian tax purposes.

Classifying crypto assets

There have been a number of attempts to classify crypto assets in different ways, particularly for the purposes of regulation – both in considering whether current regulatory regimes may apply to crypto assets, and in considering whether new regulations should be introduced that would apply specifically to crypto assets.

Classification into Payment, Utility and Security Tokens

The Swiss Financial Market Supervisory Authority (FINMA), in a now widely accepted classification, divided digital tokens into payment, utility and security tokens, taking the view that ‘digital tokens were to be assessed based on of their objective economic substance and subjected to existing legal regulations accordingly.’²³⁰

Similarly, the UK Cryptoassets Taskforce considered there to be three broad types of crypto assets: exchange tokens (i.e. cryptocurrencies); security tokens (which provide rights such as ownership, repayment of a specific sum of money, or entitlement to a share in future profits); and utility tokens (which can be redeemed for access to a specific product or service).²³¹

The OECD set out this three-way division in the following table:²³²

Payment tokens (virtual currencies)	Security (or Asset and Financial) tokens	Utility (or Consumer) Tokens
<p>Intended to operate most similarly to traditional, fiat currencies.</p> <p>Payment tokens are usable as a means of exchange for goods or services, and possibly also as a store of value and unit of measurement.</p> <p>Often referred to as virtual or cryptocurrencies.</p> <p>Examples include bitcoin, litecoin, ether.</p>	<p>Designed as tradeable assets that are held for investment purposes and classified as a security (or equivalent) under applicable laws.</p> <p>Examples include Spice, tZero²³³ and BCAP.</p>	<p>Primary use is to facilitate the exchange of or access to specific goods or services.</p> <p>They may for instance, act as a licence to allow the holder access to a particular service, as pre-payment or voucher for a good or service (even where that good or service is not yet available).</p> <p>Examples include: Storj – a token that provides access to a peer-to-peer network cloud storage service or the Basic Attention Token used by the Brave search-engine to reward users for their search data.</p>

230 Vincent Ooi, ‘A Framework for Understanding the Taxation of Digital Tokens’ (2021) 50(4) *Australian Tax Review* 260, 261.

231 United Kingdom, *Cryptoassets Taskforce: final report* (Final Report, October 2018) 11.

232 OECD, *Taxing Virtual Currencies* (n 6) 12.

233 The tZero exchange announced its closure on 6 March 2023.

Common categories and types of crypto assets

The OECD considered this three-way division as a good first step in supporting the formulation of regulatory responses to crypto assets, but also considered that its broad nature raises several issues including:

- that there could be different interpretations of the categories across jurisdictions which may result in a different tax implications
- the categories potentially do not cover all crypto assets
- some crypto assets can be classified under multiple categories.

Additionally, the OECD noted that some crypto assets might resemble ‘conventional’ assets like securities, but others (like cryptocurrencies) may not.²³⁴

Classification into Financial, Debt and Equity Instruments

Different crypto assets can have features that are common with financial, debt and/or equity instruments.

Financial Instruments

Parsons²³⁵ argues that ‘characteristics such as trading on exchanges and price volatility may suggest the classification of the sale of crypto-asset tokens by originators is the issuance of a financial instrument’.²³⁶ He ‘noted that countries such as Canada, South Africa and Switzerland (in respect of ‘equity tokens’) consider or designate crypto asset tokens to be financial instruments, while others such as Austria, Denmark and France explicitly or implicitly reject such classification’.²³⁷

Parsons ‘emphasises that financial instruments create a financial asset for one party, which may be cash, an equity instrument, or a contractual right to receive cash or a financial asset or liability, or a contract which may be settled in the holder’s own equity instruments under certain conditions.’²³⁸

234 OECD, *Taxing Virtual Currencies* (n 6) 13.

235 Also see Allen, Berg and Lane (2023) (n 105) 5—8.

236 Shaun Parsons, *Taxing Crypto-Asset Transactions: Foundations for a Globally Coordinated Approach* (IBFD 2023) Ch 5 [5.3.2].

237 Shaun Parsons, *Taxing Crypto-Asset Transactions: Foundations for a Globally Coordinated Approach* (IBFD 2023) Ch 5 [5.3.2].

238 Shaun Parsons, *Taxing Crypto-Asset Transactions: Foundations for a Globally Coordinated Approach* (IBFD 2023) Ch 5 [5.3.2].

Debt instruments

In relation to classifying crypto assets as a debt instrument, Parsons states that it ‘has already been considered in the context of stablecoins, where it was concluded that the definitive criteria would include the holder’s contractual right to redemption’.²³⁹

Equity instruments

Parson identified that equity instruments represent ‘an ownership interest in an entity (typically a company), with an accompanying right to participate in profits and in the residual assets of the entity on liquidation.’²⁴⁰ He argues that ‘while crypto-asset tokens may not currently be legally recognized as shares, whether classification for the purposes of taxation as the issuing of an equity instrument would achieve horizontal equity merits further consideration’ but that ‘such classification would result in there being no income tax consequences for the originator, since the issuance of shares is a fund-raising rather than an economic activity’.²⁴¹

Classification on basis of link to conventional assets

As the analysis in Chapter 3 shows, some crypto assets are intended to represent or are linked to conventional assets external to the system, such as money or debt obligations, or a contractual right of some kind – such as a right to attend a performance, the token for which would be an NFT. These are sometimes referred to as ‘tethered, exogenous or off-chain’. Such an external asset would be property. Other crypto assets (such as cryptocurrency or tokens derived from cryptocurrency under DeFi) have value in and of themselves, without any link to conventional assets external to the system (the *native* or *on-chain* asset).²⁴² These are two distinct types of crypto assets. Whilst legal (and therefore taxation) issues arise in relation to both types of crypto assets, these legal issues can be particularly significant in the case of the latter type of crypto assets: for example, are they property?

239 Shaun Parsons, *Taxing Crypto-Asset Transactions: Foundations for a Globally Coordinated Approach* (IBFD 2023) Ch 5 [5.3.2.1].

240 Shaun Parsons, *Taxing Crypto-Asset Transactions: Foundations for a Globally Coordinated Approach* (IBFD 2023) Ch 5 [5.3.2.2].

241 Shaun Parsons, *Taxing Crypto-Asset Transactions: Foundations for a Globally Coordinated Approach* (IBFD 2023) Ch 5 [5.3.2.2].

242 UK Jurisdiction Taskforce, *Legal Statement on Cryptoassets and Smart Contracts* (Statement: The LawTech Delivery Panel, November 2019) [33] quoted with approval in *Ruscoe and Moore v Cryptopia Limited (in Liquidation)* [2020] NZHC 728.

Crypto assets as property

Introduction

Whether or not crypto assets are property is of significant relevance to many areas of law, including the determination of how the tax law may apply to them. In Chapter 7, the Board has indicated the relevance of property throughout income tax law, particularly in relation to capital gains tax, deductible gifts, fringe benefits tax and superannuation.

The following analysis provides a high-level consideration of whether crypto assets are appropriately classified as property with reference to the Ainsworth Test and Australian and international positions taken.

For the reasons set out in the following analysis, in this Report the Board takes the view that crypto assets are property. If crypto assets are not property, then appropriate taxation of crypto asset transactions may require legislative amendment.

The Ainsworth Test

The common test that is applied for determining if something is property was established in *National Provincial Bank Ltd v. Ainsworth* [1965] AC 1175, described as the 'Ainsworth Test'. In this case, Lord Wilberforce said that before a right or an interest can be admitted into the category of property, or of a right affecting property, it must be 'definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability'.²⁴³ Assignability is not necessarily required in all circumstances.²⁴⁴

ATO position

In Australia, the Commissioner has provided a view in relation to the classification of crypto assets as property in Taxation Determination [TD 2014/26](#) *Income tax: is bitcoin a 'CGT asset' for the purposes of subsection 108-5(1) of the Income Tax Assessment Act 1997?* (TD 2014/26). While this determination specifically relates to bitcoin, the ATO has relied upon this determination in published edited private binding rulings (PBRs) relating to other crypto assets, stating that it applies by extension to other cryptocurrencies. In one published edited PBR, the ATO has extended the application to non-fungible tokens on the basis that non fungible tokens have the same characteristics as bitcoin.²⁴⁵

The ATO's conclusion that bitcoin is property is based upon the consideration that bitcoin holding rights are rights of control over one or more bitcoin in the holder's bitcoin wallet. The ATO notes that these rights do not amount to a chose in action, but that other factors support a conclusion that bitcoin holding rights are proprietary in nature. The ATO has considered the application of the Ainsworth Test and concludes that

243 At 1247, 1248.

244 Mason J in *R v Toohey & Anor; ex parte Meneling Station Pty Ltd & Ors* (1982) 158 CLR 327 [342].

245 ATO, *Cryptocurrency – non-fungible tokens* (PBR Authorisation Number 1051694175099, 1 October 2020).

bitcoin holding rights are definable, identifiable by third parties, capable of assumption by third parties and sufficiently stable.²⁴⁶

Common law

The Board has been unable to identify any Australian case that specifically considers the question of whether crypto assets are property, although there was no dispute and the court did not question that bitcoin was property in *Commissioner of the Australian Federal Police v Bigatton* [2020] NSWSC 245 at [60] (Cavanagh J) and *Chen v Blockchain Global Ltd and ors* [2022] VSC 92 (Attwill J). Further, in *Seribu Pty Ltd v Commissioner of Taxation* [2020] AATA 1840 (16 June 2020), the Administrative Appeals Tribunal (Deputy President McCabe) accepted the Commissioner's submissions that if bitcoin is held on capital account it is subject to capital gains tax (which in turn requires that it be a 'CGT asset' as defined in the legislation, being 'any kind of property' or 'a legal or equitable right that is not property' – see Chapter 7).

Although there is limited Australian case law on this point, there has been judicial consideration in a number of overseas common law jurisdictions, which have concluded that crypto assets are property. Two examples are outlined below.

In a 2019 Singaporean case of *B2C2 Ltd v Quoine Pte Ltd* [2019] 4 SLR 17, the parties agreed that cryptocurrency, while not property in the traditional sense, did fall within the general definition of property, with Thorley J agreeing and concluding that while cryptocurrencies are not considered legal tender in the sense of being a regulated currency issued by a government, they do have the fundamental characteristic of intangible property as being an identifiable thing of value.²⁴⁷ In reaching this conclusion, His Honour applied the Ainsworth Test.

A more recent statement in relation to the nature of cryptocurrency as property was in the High Court of NZ's 2020 decision in *Ruscoe and Moore v Cryptopia Limited (in Liquidation)* (Ruscoe and Moore).²⁴⁸ This case dealt with a significant NZ based cryptocurrency exchange (Cryptopia), which went into liquidation in 2019 following a hack. The liquidators applied for directions as to whether the cryptocurrencies held were assets of the company, and as to whether these were held on trust for account holders, impacting the ultimate creditor distribution from the liquidation.

In considering the question of whether the cryptocurrency was property in *Ruscoe and Moore*, Justice Gendall concluded that cryptocurrency satisfies the Ainsworth Test:

They are a type of intangible property as a result of the combination of three interdependent features. They obtain their definition as a result of the public key recording the unit of currency. The control and stability necessary to ownership and for creating a market in the

246 ATO, *Income tax: is bitcoin a 'CGT asset' for the purposes of subsection 108-5(1) of the Income Tax Assessment Act 1997?* (TD 2014/26, 17 December 2014) [11] ('TD 2014/26').

247 *B2C2 Ltd v Quoine Pte Ltd* [2019] SGHC(I) 03, [142].

248 *Ruscoe and Moore v Cryptopia Limited (in Liquidation)* [2020] NZHC 728 ('*Ruscoe and Moore* (2020)').

coins are provided by the other two features – the private key attached to the corresponding public key and the generation of a fresh private key upon the transfer of the relevant coin.²⁴⁹

Justice Gendall also considered whether the cryptocurrency could be considered as a chose in action or chose in possession,²⁵⁰ stating that the debate should not be ‘about the limits of what can be recognised as ‘property’ but simply about the number of categories of ‘property’ one needs’²⁵¹.

Ruscoe and Moore also considered the idea that cryptocurrency is information and that information is not property. Justice Gendall observed that cryptocurrencies are more than mere information noting:

- The system of private keys analogous to a bank account personal identification number meant that cryptocurrency could be traded.
- Contracts could be treated as property, not due to the words or the promise but because equity recognised a unique relationship between the parties and provided a system for transfer of contractual rights.
- The view that information was not property because it was ‘open to all who have eyes to read and ears to hear’²⁵², did not apply to cryptocurrency, which could not be infinitely duplicated due to the combination of unique public keys and the inability to transfer without access to the corresponding private key.²⁵³

UK Law Commission

In July 2022, the Law Commission of England and Wales (Law Commission) published proposals for consultation to reform the law relating to digital assets, publishing a report in June 2023.²⁵⁴

The Law Commission consulted in relation to the potential inability for digital assets to be categorised properly in either of the traditionally recognised property categories of things in possession or things in action.

The Law Commission considered that some data objects, such as crypto tokens, might represent, record, or be linked to other things (including legal rights) which are external to that particular crypto token and/or crypto token system. They focussed on the crypto token as an object of property rights in itself, rather than anything to which it may be (purportedly) linked.

The Law Commission’s final report concluded that the common law of England and Wales was that crypto assets are capable of attracting personal property rights, and that this is clearly the position at common

249 *Ruscoe and Moore* (2020) (n 248) [120].

250 Also referred to as ‘thing in action’ or ‘thing in possession’.

251 *Ruscoe and Moore* (2020) (n 248) [123].

252 *Boardman v Phipps* [1967] 2 AC 46, 127 (Lord Upjohn) (HL).

253 Summary from Paul Babie, David Brown, Ryan Catterwell and Mark Giancaspro, *Case Note Cryptocurrencies as Property: Ruscoe and Moore v Cryptopia Limited (In Liquidation)* [2020] NZHC 728.

254 UK Law Commission, *Digital Assets: Final Report* (n 8).

law.²⁵⁵ More particularly, the Law Commission said that some digital assets are neither things in possession nor things in action, but that nonetheless they could be capable of being things to which personal property rights can relate.²⁵⁶ Nevertheless and in light of submissions from some consultees, including senior and specialist judges, the Law Commission recommended statutory confirmation that a thing will not be deprived of legal status as an object of personal property rights merely by reason of the fact that it is neither a thing in action nor a thing in possession, but that it is not necessary or appropriate to define in statute the hard boundaries of ‘such a third category of thing’.²⁵⁷

Contrary Views

That crypto assets are property is not universally accepted. For instance, in a forthcoming article in the Law Quarterly Review, Professor Robert Stevens of the University of Oxford opines that crypto assets are not property.²⁵⁸ Professor Stevens argues that ‘Cryptoassets are just numbers within a system operating over the internet’, and ‘a form of information, admittedly with special factual features given to it by virtue of the system within which it makes sense. But that is all.’ Professor Stevens goes on to say that if ‘a third party were (extremely improbably) able to guess the private key, access the cryptoasset and sell it, there would not without more be any claim. This is the equivalent of another independently discovering where gold is buried, and we have no right to information as such.’ Professor Stevens concludes that:

Some proponents of the view that crypto is ‘property’ have focussed not on its value, but on the factual ways in which it resembles physical things. In particular, it is rivalrous and in practice possible to exclude others from.²⁵⁹ This is the layperson’s mistake ... Tables, chairs, areas of land, mobile phones and pieces of paper are not property because they are things. They are property because we have legal rights in relation to those things. The moon and the fish in the sea are things, but they are not ‘property’. Nobody has ever identified any right in relation to crypto nor how it would be vindicated. Therefore, it is not property.’

Submissions received

The Board has received considerable stakeholder feedback in relation to whether crypto assets are property. The written submission from Cartland Law, endorsed by STEP Australia, provided a detailed analysis of the relevant considerations on this question and stated:

The ATO’s view of the current tax treatment of crypto in Australia is clear, although there are many difficulties in practice. However, the Commissioner’s view of crypto diverges from fundamental common law principles of what constitutes property. It seems unlikely that a

255 UK Law Commission, *Digital Assets: Summary of final report* (Report, 28 June 2023) 5 (‘UK Law Commission, *Digital Assets: Summary of final report*’).

256 UK Law Commission, *Digital Assets: Summary of final report* (n 255) 7.

257 UK Law Commission, *Digital Assets: Summary of final report* (n 255) 8. See also UK Law Commission, *Digital Assets: Final Report* (n 8) 44, [3.40], referencing *Tulip Trading v Van Der Laan* [2023] EWCA Civ 83, [2023] 4 WLR 16 at [24]–[25].

258 Robert Stevens, ‘[Crypto is Not Property](#)’ (2023) *Law Quarterly Review* (forthcoming).

259 Citing the UK Law Commission, *Digital Assets: Consultation Paper* (Consultation Paper, 28 July 2022).

Court would necessarily follow the ATO's view. The divergence between the ATO's view and common law creates uncertainty for the reasons set out in this submission.

Crypto assets are not property and attempts to treat them as property are incongruent with other practices. If code is treated as property this will create a fundamental problem in the administration of tax laws and the application of software in Australia.²⁶⁰

The Law Institute of Victoria²⁶¹, PwC²⁶² and Cadena Legal²⁶³, all described the challenges at common law and the specific nature of crypto assets. Further, the Members of the Tax Profession²⁶⁴, Blockchain & Digital Assets – Services + Law²⁶⁵ and KPMG²⁶⁶ all referenced the UK Law Commission's work, noting the proposed third category of property.

Board's Conclusion

A number of submissions indicated that whether or not cryptocurrencies are property at law is not clear, with the argument that they are not property being based, broadly, on the fact that cryptocurrencies derive their existence from computer code and are therefore merely information.

Notwithstanding this, the Board notes that a number of international judicial decisions have concluded that cryptocurrencies represent a form of property and Australian decisions have assumed the same. The Board has concluded that the ATO's position that cryptocurrencies are property for tax purposes is appropriate. Where relevant, the Board's considerations, observations and recommendations as set out in this Report assume that crypto assets are correctly classified as property.

If it is ultimately determined that crypto assets are not property at common law, then many of the analyses, conclusions, observations and recommendations in this Report would be affected. Should this occur and the Government not decide to legislatively deem crypto currencies to be property or to have proprietary rights, the Government may need to revisit the issues in this Report.

260 Submission A28, 1; Submission A29, 1.

261 Submission A40, 2.

262 Submission A26, 5.

263 Submission A19, 21.

264 Submission A08, 2–3.

265 Submission A27, 4.

266 Submission A30, 16.

Observation 4.1

Both Australian and international judicial decisions have accepted or determined that crypto assets are property at common law, notwithstanding that they may not fit easily within established property categories of things in possession or things in action.

The Board has assumed for the purposes of the remainder of this Report that crypto assets are property. If this is ultimately found to be incorrect and the Government does not then legislatively deem crypto assets to be property, the Government may need to revisit the issues in this Report.

Crypto assets as foreign currency

Overview

The classification of crypto assets, specifically cryptocurrencies as a currency, has been subject to much global contention, particularly as the prevalence of bitcoin has grown. In 2014, the ATO provided a Taxation Determination²⁶⁷ confirming its position that bitcoin was not currency and therefore not a foreign currency. However, this conclusion became contentious when in 2021 El Salvador introduced a law that bitcoin was legal tender. The Australian Government responded to this development through legislation that such crypto assets would not be treated as foreign currency for tax purposes.

In this section the Board provides a brief overview of the nature of cryptocurrency and the foreign currency exclusion. Given the Australian Government's legislative amendment, in undertaking this review the Board has assumed that cryptocurrency is not foreign currency, and has not considered the consequences if cryptocurrency is foreign currency.

Cryptocurrency and tax law relating to 'foreign currency'

Australia has a specific regime that deals with the taxation of foreign exchange gains and losses which is contained in Division 775 of the *Income Tax Assessment Act 1997* (ITAA 1997).²⁶⁸ Under this regime, foreign realisation gains and losses are determined based on nine specified forex realisation events. In 2014, the ATO published Taxation Determination TD 2014/25 *Income tax: is bitcoin a 'foreign currency' for the purposes of Division 775 of the income Tax Assessment Act 1997?* (TD 2014/25). At that time foreign currency was defined for tax purposes as a currency other than Australian currency. For the purposes of this definition, the Commissioner considered that the intended meaning was the same as that used in the *Currency Act 1965* and that currency could relevantly be divided into two types – Australian currency, and every currency that is recognised and adopted by the laws of any other sovereign State as the monetary

267 ATO, *Income tax: is bitcoin a 'foreign currency' for the purposes of Division 775 of the income Tax Assessment Act 1997?* (TD 2014/25, 17 December 2014) ('TD 2014/25').

268 Contained in ITAA 1997 sub-div 775.

unit and means of discharging monetary obligations and payments in the respective sovereign State (that is, foreign currency).²⁶⁹

The ATO position was challenged when El Salvador introduced a law to the effect that bitcoin would become legal tender in that country from 7 September 2021. In response, the Government passed legislation in June 2023 applicable in relation to an income year that includes 1 July 2021 and later income years to ensure that certain crypto assets, such as bitcoin, were excluded from the definition of foreign currency.

The legislation relies on amending the existing definition of digital currency in the *A New Tax System (Goods and Services Tax) Act 1999* (GST Act) before adopting it as an exclusion from the definition of foreign currency in ITAA 1997. As a result, crypto assets (including cryptocurrencies such as bitcoin) that meet the digital currency definition will not be treated as foreign currency. The Board has provided further consideration of this definition in Chapter 10 of the Report as part of its analysis of indirect tax issues.

Submissions received

The Treasury consultation in relation to the amendments to ensure that cryptocurrencies were not included as foreign currency occurred at the same time as the Board's consultation in relation to this Review. Accordingly, a number of stakeholders provided feedback to the Board in relation to the proposed amendment.

The feedback received by the Board included:

- concerns about the potential retrospectivity of the amendments²⁷⁰
- concerns about the stated purpose for the amendment²⁷¹
- whether it may be more appropriate to tax crypto assets under the forex or TOFA regimes²⁷²
- limitations on the ability for a regulation to be prescribed to include a particular crypto asset as foreign currency²⁷³
- whether the new legislation is going in the right direction noting the GST legislation, the *Anti-Money Laundering and Counter-Terrorism Financing Act 2006* (AMLCTFA) and the RBA see digital currencies as currencies.²⁷⁴

269 TD 2014/25 (n 267) [32].

270 Submission A33, 29.

271 Submission A08, 8.

272 Submission A22, 2.

273 Submission A30, 21.

274 Submission A32, 8.

Board's Conclusion

Observation 4.2

The Government decision to legislate that cryptocurrencies such as bitcoin are **not** foreign currency for tax purposes provides certainty and clarity to taxpayers and is consistent with most international treatment (see Chapter 12).

Potential risks and concerns

The crypto ecosystem is not without its detractors, and a number of potential risks and concerns have been raised in relation to digital assets, including by Australian and overseas government-related bodies.²⁷⁵ These risks can be divided into three types:

- environmental
- criminal activity
- financial risks.

In the following paragraphs, the Board outlines what has been contended about these risks during our review.

The Board notes upfront that there are differing views in relation to the seriousness of these risks. This Report does not provide a detailed analysis of these risks, or the counter arguments to them. It is not the purpose of this Report to undertake an assessment of the costs and benefits of the crypto ecosystem.

However, the Board considers that it is relevant to identify and document these risks because they were the subject of some discussion in consultations. Further, the Board considers that these risks are specifically relevant to the following matters in this Report:

- The Board has indicated at various times in this Report that some taxation issues are matters of policy for the Government. Any policy considerations may need to take into account broader risks such as those that have been identified as part of this review and other Australian governmental reviews that are in progress or have been completed.
- In the next Chapter 5 of this Report, the Board sets out a Principles Framework that it has developed for considering the appropriate taxation framework to apply to crypto assets and transactions. Some of the principles developed include considerations of neutrality. The risks identified below may be relevant when considering whether there is true neutrality between digital assets and transactions, and assets and transactions in more traditional finance arrangements.

275 For example: Reserve Bank of Australia, *Financial Stability Review – October 2022* (Report, October 2022) 15–22; Hilary J Allen, 'The Superficial Allure of Crypto', IMF (Web Page, September 2022); Bank for International Settlements, *The Crypto ecosystem: key elements and risks: Report submitted to the G20 Finance Ministers and Central Bank Governors* (Report, July 2023).

Environmental

The electricity to support a distributed ledger technology is significant, and no more so than the electricity to support bitcoin mining. In October 2023, the United Nations University reported that:

... during the 2020–2021 period, the global Bitcoin mining network consumed 173.42 Terawatt hours of electricity. This means that if Bitcoin were a country, its energy consumption would have ranked 27th in the world, ahead of a country like Pakistan, with a population of over 230 million people. The resulting carbon footprint was equivalent to that of burning 84 billion pounds of coal or operating 190 natural gas-fired power plants. ...

during this time period, bitcoin's water footprint was similar to the amount of water required to fill over 660,000 Olympic-sized swimming pools, enough to meet the current domestic water needs of more than 300 million people in rural sub-Saharan Africa. ...

The US scientists report that Bitcoin mining heavily relies on fossil energy sources, with coal accounting for 45% of Bitcoin's energy supply mix, followed by natural gas (21%). ... Renewables such as solar and wind only provide 2% and 5% of the total electricity used by bitcoin.²⁷⁶

A proof of stake network (rather than a proof of work network such as Bitcoin) uses much less energy, with estimates of a 99.9% reduction in carbon emissions when Ethereum moved from a proof-of-work protocol to a proof-of-stake protocol.²⁷⁷

Criminal Activity

In April 2022, AUSTRAC released its Financial Crime Guide 'Preventing the Criminal Abuse of Digital Currencies' to assist financial service providers, including digital currency exchange providers to understand, identify and report criminal activity facilitated through digital currencies.²⁷⁸ AUSTRAC states that 'The pseudo-anonymous and borderless nature of digital currencies can make them a risk for criminal activity including money laundering, terrorism financing, ransomware and more.'²⁷⁹

The proportion of criminal use of crypto can be difficult to estimate. However, different analyses are being undertaken.

Criminal use of crypto broadly comes in two types:

- Cryptocurrency theft as a result of hacks. In their 2023 Crypto Crime Report, Chainalysis reported that 2022 was the biggest year for crypto hacking with \$3.8 billion stolen, that DeFi protocols accounted for 82.1% of all cryptocurrency stolen by hackers, and that 64% of that came from cross-chain bridge protocols.²⁸⁰

276 United Nations University, '[UN Study Reveals the Hidden Environmental Impacts of Bitcoin: Carbon is Not the Only Harmful By-product](#)' (Press Release, 24 October 2023), and papers cited and referenced therein.

277 Nathan Reiff, '[What's the Environmental Impact of Cryptocurrency](#)', *Investopedia* (Web Page, 31 December 2023).

278 AUSTRAC, '[Preventing the Criminal Abuse of Digital Currencies Financial Crime Guide](#)' (Guide, April 2022).

279 '[Preventing the criminal abuse of digital currencies](#)', AUSTRAC (Web Page, 5 April 2023).

280 '[2022 Biggest Year Ever For Crypto Hacking with \\$3.8 billion Stolen, Primarily from DeFi Protocols and by North Korea-linked Attackers](#)', *Chainalysis* (Blog, 1 February 2023).

- Criminals using cryptocurrency for illicit activity. It has been estimated that total cryptocurrency value received by illicit addresses in 2022 were \$20.1 billion, and that this is a lower bound estimate likely to grow as new addresses associated with illicit activity are identified. This figure also doesn't capture proceeds from non-crypto native crime such as drug trafficking involving cryptocurrency as a mode of payment.²⁸¹

It has also been estimated, however, that the criminal use of crypto as a percentage of all crypto use is falling – that whilst the use of crypto by criminals is increasing, the use of crypto for non-criminal purposes is increasing at a faster rate.²⁸²

Financial Risks

In its July 2023 report 'The Crypto Ecosystem: Key Elements and Risks', submitted to the G20 Finance Ministers and Central Bank Governors, the Bank for International Settlements concluded that:²⁸³

- The crypto ecosystem is subject to a high degree of fragmentation and is characterised by congestion and high fees.
- The original decentralised ethos has been compromised by centralised intermediaries, with the same vulnerabilities of traditional finance as evidence by the 'implosion of the FTX crypto exchange'. Tim O'Reilly was quoted by an article published by the International Monetary Fund as saying that 'Blockchain turned out to be the most rapid recentralization of a decentralized technology that I've seen in my lifetime.'²⁸⁴
- While crypto has offered some elements of genuine innovation, these can be replicated or embedded in the safer and more trusted traditional finance system.
- Crypto and DeFi often feature substantial de facto centralisation, for example stablecoins tied to fiat currencies and may pose risks to monetary sovereignty.
- While DeFi mostly replicates services offered by the traditional financial system, it does not finance any activity in the real economy but amplifies known risks. As growth is driven mainly by the speculative influx of new users hoping for high returns, crypto and DeFi pose substantial risks to (especially retail) investors. In sum, crypto's inherent structural flaws make it unsuitable to play a constructive role in the monetary system.²⁸⁵

281 ['2023 Crypto Crime Trends: Illicit Cryptocurrency Volumes Reach All-Time Highs Amid Surge in Sanctions Designations and Hacking'](#), *Chainalysis* (Web Page, 12 January 2023).

282 David B Black, ['Cryptocurrency Fuels Growth of Crime'](#), *Forbes* (Web Page, 11 March 2022).

283 Bank for International Settlements, [The crypto ecosystem: key elements and risks Report submitted to the G20 Finance Ministers and Central Bank Governors](#) (Report, July 2023).

284 Hilary J Allen, ['The Superficial Allure of Crypto'](#), *International Monetary Fund* (Web Page, September 2022).

285 Bank for International Settlements, [The crypto ecosystem: key elements and risks Report submitted to the G20 Finance Ministers and Central Bank Governors](#) (Report, July 2023).

Chapter 5: Principles Framework

Key Points

The Board has developed a Principles Framework for the taxation of digital assets and transactions which, if applied consistently, will:



Promote certainty
simplicity and integrity.



Promote competitive,
revenue, technological
and functional neutrality.



Apply tax based on
existing ordinary tax
principles, unless there
are unforeseen or
unintended outcomes.

Introduction

The purpose of this chapter is to formulate and explain a set of tax principles (Principles Framework) which should be used when considering the suitability of current Australian taxation laws and/or any amendments to, or creation of new, tax legislation for crypto assets and transactions.

Context and purpose

As set out in the Review's Consultation Guide, in analysing the tax treatment of crypto assets in Australia, from creation to the various forms of exchange or disposal, the Board may recommend the establishment of a set of tax principles, amendments to current Australian taxation laws to comply with these principles, and/or the establishment of a new taxing regime.

After a detailed analysis of the written submissions and the discussions at consultation meetings, the Board has formulated this Principles Framework to assist the Government in creating, designing, and implementing tax policy responses to current and future issues in the tax treatment of crypto assets and transactions.

Consultation

These principles have been developed by the Board through consultations, written submissions received, discussions with revenue authorities from international jurisdictions, and its research and literature review.

A number of submissions supported the establishment of a principles framework for developing and reforming Australian taxation of digital assets, including various proposals for what those principles should contain.²⁸⁶

For example, the Members of the Tax Profession stated:²⁸⁷

As such, we propose that a set of guiding principles be established to aid taxpayers and tax practitioners to interpret the most appropriate tax treatment. These principles ought to be underpinned by principles of a good tax system, in particular equity, simplicity and ultimately aimed at promoting compliance.

Observation 5.1

There was considerable support in consultations for the development of a principles framework for assessing, developing, and potentially reforming Australian taxation of digital assets and transactions.

This considerable support in consultations for the development of a principles framework for assessing, developing, and potentially reforming Australian taxation of digital assets. There was not, however, universal support for a principles-based approach to the drafting of any proposed legislation to deal with crypto assets and transactions. The Law Council of Australia argued that:

There are a number of examples in the tax law where a principles-based approach has led to overreliance on the Explanatory Memorandum and lengthy ATO companion documents on the meaning of generalised terms in the legislation. This can lead to uncertainty for taxpayers and tax advisors until the Courts are able to consider the legislation, which can take many years after the relevant law has been introduced.²⁸⁸

Policy Objectives

The tax treatment of crypto assets should have regard to the Government's policy objectives for the regulation of crypto assets which include protecting consumers and ensuring true innovation can flourish. In

286 Submission A10, 20; Submission A30, 10–11.

287 Submission A08, 11.

288 Submission A39, 6.

order to improve the regulation of crypto assets the Government is strengthening enforcement, bolstering consumer protection, and establishing a framework for reform.

The Treasury released its token mapping consultation paper in early 2023. The paper provided a framework for understanding crypto tokens and related services from a practical legal and technical perspective. It applied this framework to analysing the suitability of the existing financial services laws in the context of consumer protection. While the paper did not specifically consider all policy objectives (such as tax transparency and financial stability), the framework contained in the paper provides a practical starting point for such an exercise. In October 2023, the Government released a Proposal Paper seeking views on its proposal to incorporate digital asset platforms and other intermediaries within the existing financial services framework.²⁸⁹

The Board's view

The review is undertaken in the context of extensive government consideration of crypto assets and their regulation. In this context, the Board has taken the approach at this early stage in the rapidly developing crypto asset market and related regulatory regime that it should only recommend any legislative change to deal with the taxation of crypto assets in either of the following two circumstances:

- It is clear that the current tax system does not deal properly or adequately with crypto assets or certain types of crypto assets.
- The current crypto asset market is such that there is significant leakage of Australia's revenue base, the prevention of which requires legislative change.

Any proposed legislative change should seek to provide a long-term solution, rather than a short-term solution, to a confirmed issue regardless of the way in which the crypto asset market develops and matures. The Principles Framework provides a methodology for assessing the effectiveness of the current tax system in dealing with digital assets and for determining when reform may be required.

In assessing any proposed measure by reference to the Principles Framework, all relevant factors should be considered. Relevant factors may in some circumstances include features of the crypto ecosystem that have been the subject of criticism, such as risks and integrity concerns associated with crypto assets including the potential for dealings (including criminal dealings) designed to circumvent regulation and government scrutiny and the role of crypto assets in phoenix arrangements. For further see Chapter 4.

289 The Treasury, *Regulating Digital Asset Platforms* (n 10).

Principles

Principle 1: The law should promote certainty, simplicity and integrity.

Any current or new taxation law relating to crypto assets and transactions should be updated or designed to provide certain, clear and consistent outcomes for the taxpayer.

Principle 1 seeks to achieve the following goals:

Support taxpayer compliance

- Be clear and simple to understand to enable taxpayers to determine the correct tax treatment.
- Provide taxpayers with access to reporting and records to enable them to comply with their taxation obligations.
- Regulators must provide certainty in relation to the evidentiary requirements for complying with these obligations.

Be administrable

- Be administrable by the regulators, including the ATO having access to the relevant evidentiary requirements for administration of the law.

Provide consistency

- Provide clear definitions of specific crypto asset or activity terminology that are consistent with other forms of domestic and international regulation.
- Seek to be consistent with relevant domestic law and regulation of crypto assets and transactions where there are interactions between regulatory and taxation regimes.

Be compatible with comparable international tax regimes²⁹⁰

- Promote integrity by removing or reducing the ability to manipulate the system and not pay the correct amount of tax in Australia.
- Minimise the opportunity for international tax arbitrage through consistency with relevant international laws and regulations.

²⁹⁰ For example, the European Parliament has voted on adopting the regulation on markets in crypto assets (MiCA). The regulation establishes harmonised rules for crypto-assets at EU level, thereby providing legal certainty for crypto-assets not covered by existing EU legislation. By enhancing the protection of consumers and investors as well as financial stability, the regulation promotes innovation and use of crypto assets.

- Seek to avoid the incidence of double taxation.

Be resilient

- Keep ahead of changes and seek to be resilient to the fast-paced nature of the industry.

Principle 2: Technology Neutrality Principle – taxpayers should be able to meet their taxation obligations through the adoption of a technology neutral position.

The Government should not impose any constraints on the selection and use of technology by the taxpayer.

This principle is enshrined in the *Electronic Transactions Act 1999* (Cth) which is uniform legislation throughout Australia, and which stabilised and provided certainty in the development of ecommerce in Australia. In its submission to the Review, the Law Council of Australia noted its support for the ALRC's position that any regulation should be technology neutral, and its legislative hierarchy model.²⁹¹

Principle 3: Equity and Functional Neutrality Principle – crypto assets and transactions with same function and effect as other assets should have the same tax outcomes.

The taxation of crypto assets and transactions should be based on the principle of 'same activity, same risk, same tax treatment or regulation'²⁹².

Where crypto assets and transactions have a similar or an equivalent economic function to a different crypto asset and transaction or one performed in the traditional financial sector, they should be subject to the same tax treatment regardless of how a particular crypto asset is characterised (for example as a payment, security or other instrument).

This principle is based on the tax policy concept of horizontal equity. Horizontal equity requires that taxpayers in similar situations are taxed in a similar manner and that transactions of a similar economic substance are taxed similarly.²⁹³

291 Submission A39, 6.

292 The United Kingdom has made their regulatory objectives clear by adopting a regulatory principle of 'same risk, same regulatory outcome'.

293 Asprey, K, Lloyd J, Parsons R & Wood K, *Taxation Review Committee; Full Report* (Report, 1975) AGPS.

Principle 4: Competitive Neutrality Principle – the law should not encourage/discourage asset substitution.

The taxation framework should seek to deliver a competitively neutral outcome. The tax treatment of crypto assets and transactions should neither encourage nor discourage substitution from crypto assets to other financial assets, or vice versa.

Tax should not in principle distort market behaviour unless there is a clear policy objective for incentivising or disincentivising.²⁹⁴

Principle 5: Revenue Neutrality Principle – any new law should be revenue neutral.

The taxation framework should seek to ensure that there is revenue neutrality between the current taxation regime applying to crypto assets and transactions and any changes/amendments to the current taxation regime or proposed future taxation regime. The Board notes the importance of a sustainable system, that can be relied upon to raise revenue to fund government activities now and into the future.

The Board's Terms of Reference stipulates that there should be no increase in the overall tax burden.

Principle 6: The tax treatment of crypto assets and transactions should only depart from ordinary tax principles to resolve unforeseen or unintended tax outcomes.

The tax treatment of crypto assets and transactions should only depart from existing ordinary tax principles (including established revenue/capital principles) where there are unforeseen or unintended outcomes. Such departure should be reasonable and not substantially inconsistent with the intended purpose of those principles. This is to ensure that the taxation laws applicable to crypto assets and transactions are consistent with Principle 1:

- aligned with policy objectives
- easy to comply with
- capable of being administered.

Modifications or clarification of existing ordinary tax principles may sometimes be required to resolve unforeseen or unintended outcomes so those principles can be appropriately applied to the particular characteristics of crypto assets and transactions.

For example, it is noted that crypto assets may be subject to unique events that are not analogous with events associated with traditional financial assets, including protocol changes, wrapping, bridging and forks.

²⁹⁴ Submission A08, 4; The Board notes that examples of such incentivisation include the Research and Development Tax Incentive regime.

Conclusion

Recommendation 5.1

The Principles Framework developed by the Board promotes certainty, simplicity, integrity as well as competitive, revenue, technological and functional neutrality. It also ensures that the tax treatment of crypto assets and transactions should be based on existing ordinary tax principles, unless there are unforeseen or unintended outcomes.

The Board recommends that the Principles Framework be used as a guide by the Government, when considering the suitability of amendments to current Australian taxation laws and/or any amendments to or creation of a new tax legislation for crypto assets and transactions.

In assessing any proposed measure by reference to the Principles Framework, all relevant factors should be considered. This may include features of the crypto ecosystem that give rise to risks and integrity concerns (see Chapter 4). For example, neutrality in principles 3, 4 and 5 needs to consider the inherent integrity risks that exist for crypto assets that do not exist for other traditional assets including cash, shares and property.

Chapter 6: Taxpayer awareness and support

Key Points

- The tax profession and crypto asset industry play an important role in supporting the ATO in simplifying and ensuring tax compliance for crypto asset users.
- Taxpayers need to have access to knowledgeable tax professionals who understand their obligations in supporting their crypto asset-using clients.
- Supporting guidance in relation to crypto asset tax treatments needs to provide certainty and clarity to users.

Introduction

This chapter provides an overview of how taxpayers interact with the tax system and the organisations and resources available to support them. The analysis considers how the growing transactional and tax complexity associated with crypto assets is currently addressed through these channels and how this might be improved. The Board's view is that it is important to ensure that all Australians and not merely the younger demographic of crypto asset users are provided with a full opportunity to understand and comply with their tax obligations into the future as the industry expands.

Operation of the tax system

Australian tax system

Australia has operated under a system of self-assessment of income tax since the mid-1980s, meaning that income tax returns are generally processed and assessed following lodgement without any significant upfront examination by the ATO, but may be subject to ATO inquiry through later selective review activity.

Similarly, since 1 July 2012 following the Board's review of Goods and Services Tax (GST) administration, taxpayers can self-assess their GST-related liabilities and entitlements through lodgement of their Business Activity Statements (BAS).

The self-assessment system places responsibility on taxpayers to ensure their disclosures comply with tax laws and provides the Commissioner with a period during which the ATO may review the return or statement (commonly referred to as the period of review or limited amendment period).

The system operates through the imposition of obligations and rights upon the three main groups in the tax system: the taxpayer, the intermediary tax professional, and the ATO. The Board has considered the needs of taxpayers who are managing their own tax affairs, taxpayers that are supported by tax or BAS agents, how tax agents may be supported, and the role of the ATO. The following chart sets out some key obligations and needs of these groups:



Annual tax return lodgements

Subject to some minor exceptions, individuals and other entities are required to lodge an annual income tax return with the ATO. This lodgement may be undertaken directly by the taxpayer or through the use of an intermediary tax agent.

In Australia, the majority of individual taxpayers use a tax agent to lodge their income tax return, with ATO tax statistics for the 2021 income year indicating that nearly 2 in 3 individual taxpayers used a tax agent to lodge their tax return.²⁹⁵ This figure is significantly higher for non-individual taxpayers, with tax agent lodgements for companies at over 95%²⁹⁶ and over 98% for trusts.²⁹⁷

295 ATO, *Tax statistics 2020-21* (Individuals – Table 1, Table 1A, 26 August 2023) cells AS26, AS3; Number of individuals by tax agent returns lodgment method/total individual lodgments shows that 63.7% of 2020-21 individual tax returns were lodged as a tax agent return.

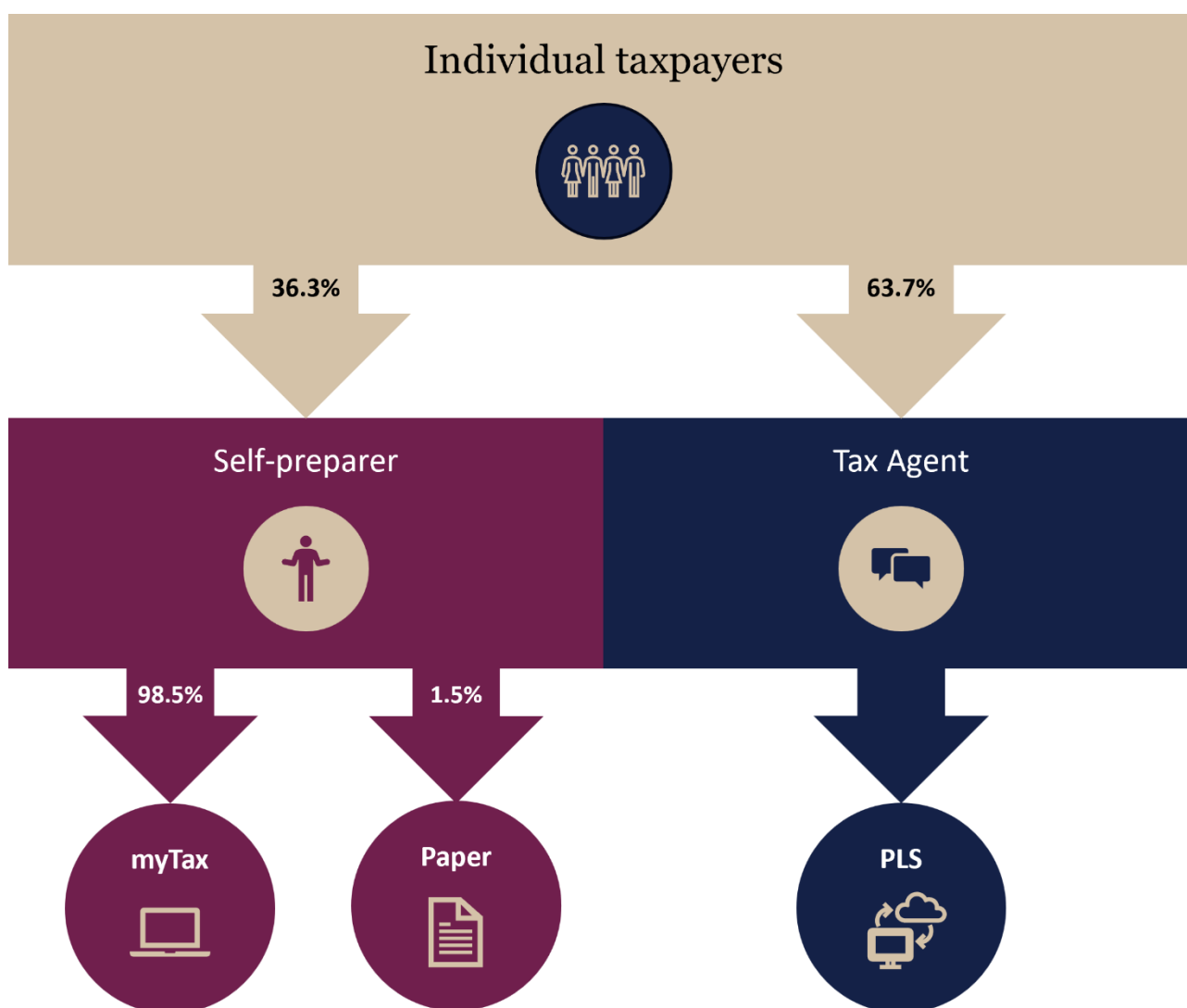
296 ATO., *Tax statistics 2020-21* (Company – Table 1, Table 1A, 27 September 2023) cells AQ35, AQ9; Number of companies by tax agent lodgment method/total company lodgments shows that 95.21% of 2020-21 company tax returns were lodged as a tax agent return.

297 ATO, *Tax statistics 2020-21* (Trust – Table 1, Table 1A, 8 June 2023) cells AG17, AG25; Number of trusts by tax agent lodgment method/total trust lodgments shows that 98.31% of 2020-21 trust tax returns were lodged as a tax agent return.

Individual taxpayers that are not using a tax agent to lodge (self-preparers) have two options for lodging their tax return: completing and lodging a paper copy of the return, or by utilising the ATO’s electronic lodgement service for individuals, *myTax*.²⁹⁸ Non-individual taxpayers that are not using the service of a tax agent currently only have the option of lodging a paper copy of the relevant tax return.

Tax agents interact with the ATO through Online services for agents and lodge relevant forms through tailored software products and utilising the ATO’s Practitioner lodgement service (PLS).

The split of individual tax lodgements based on the 2020–21 tax statistics is illustrated in the following graphic:



298 ATO, *Tax statistics 2020-21* (Individuals – Table 1, Table 1A, 26 August 2023) cells AS28, AS3; Number of individuals by myTax return lodgment method/sum of number of individuals by myTax lodgment and other self-preparer returns lodgment shows that 98.48% of 2020-21 self-preparer returns were lodged through myTax.

As set out in Chapter 2 of the Report, the ATO has indicated that around one million Australians are expected to consider whether their crypto assets should be reported on their tax returns for the 2022 income year. Research by Swyftx indicates that there may be up to 4.5 million Australians owning crypto assets.²⁹⁹ While lodgement data for the 2022 income year is not yet publicly available, average individual tax lodgements from 2018 to 2021 were 15.4 million.³⁰⁰ These numbers suggest a significant portion of taxpayers should consider whether their crypto asset related transaction should be included in their 2022 tax return.

Business activity statement lodgements

Enterprises that are registered for GST are required to lodge a periodic BAS with the ATO. In Chapter 10, the Board has set out some of the complexity that may arise for taxpayers when identifying their registration obligations from crypto asset transactions.

Role of the tax agent

Tax and BAS agents are registered through the Tax Practitioners Board (TPB) and play an important role in the tax system in helping taxpayers prepare and lodge their tax returns and BASs. The TPB was established to ensure (among other things) that tax agents maintain appropriate skills and knowledge to provide tax agent services.

Tax agents are regulated under the *Tax Agent Service Act 2009* (TASA 2009) and *Tax Agent Services Regulations 2022* (TASR 2022). Importantly, TASA 2009 sets out *The Code Professional Conduct* (Code) detailing the requirements for tax practitioners across the categories of: honesty and integrity; independence; confidentiality; competence; and other responsibilities.

There are multiple pathways to becoming a registered tax agent. Individuals are generally required to have some combination of formal qualifications, recognised work experience and professional association membership.³⁰¹ Additionally, registered tax agents are subject to a series of ongoing registration obligations and required to maintain a level of knowledge and skills relevant to the tax agent service that they are providing. In recognition of this, they are generally required to undertake a minimum 120 hours of Continuing Professional Education (CPE) across a 3-year period.³⁰² Tax agents that are also members of a professional body such as Chartered Accountants Australia and New Zealand, CPA Australia, The Tax Institute or the Institute of Public Accountants may also be required to meet additional or specific CPE obligations in relation to their membership.

299 [‘Australian Digital Assets Survey’](#), Swyftx (Web Page, August 2023).

300 ATO, *Tax statistics 2020-21* (Individuals – Table 1, Table 1A, 26 August 2023) cells AP3, AQ3, AR3, AS3; average of total individual lodgements 2017-18 to 2020-21.

301 [‘Qualifications and Experience for tax agents’](#), Tax Practitioners Board (Web Page, 1 April 2022).

302 [‘Continuing professional education’](#), Tax Practitioners Board (Web Page, 12 September 2023).

The Board notes that when it comes to providing tax advice in relation to crypto assets, the obligations imposed by the ‘maintaining a level of knowledge’ requirement will likely require a specific focus on understanding crypto assets and transactions.

There is no obligation for taxpayers with complex affairs or undertaking specific transactions to engage the services of a tax agent to assist in preparing and lodging their return. Notwithstanding this, as noted in the previous section, a significant portion of Australian individuals utilise the services of a tax agent to prepare and lodge their annual income tax return.

While the Board does not have any statistics in relation to the portion of taxpayers with crypto assets that utilise a tax agent to lodge their income tax return, in Koinly’s submission to the Review, they provided the results of a survey of retail crypto investors indicating that the majority of respondents use an accountant.³⁰³ The Board has received feedback that the majority of retail investors lack the knowledge on whether and/or how to calculate tax, given the potential complexity of crypto asset transactions, and that this ambiguity pushes them towards seeking help from tax practitioners.³⁰⁴

The Board has heard that there are significant challenges in accessing affordable and competent advice on crypto asset taxation. Further, as FinTech Australia highlighted, the absence of specialisation (or expert knowledge) in respect of the crypto assets industry amongst tax advisers affects the affordability of such services.³⁰⁵ This knowledge gap not only makes accessibility of an adviser with crypto asset tax knowledge an issue for taxpayers, but also presents challenges for the profession in meeting their registered tax practitioner obligations.

Observation 6.1

Tax advisers and tax agents perform a critical role in ensuring appropriate compliance by taxpayers with respect to crypto asset transactions. It is important that tax advisers and tax agents have the appropriate skills to advise on crypto asset transactions. Education and awareness campaigns should therefore be tailored to support both taxpayers and tax professionals.

Role of professional associations

Tax professionals, including registered tax agents, may choose to be a member of a professional membership body providing services to the tax community. The Board particularly notes the roles of the Chartered Accountants Australia and New Zealand, CPA Australia, The Tax Institute and the Institute of Public Accountants who have been collectively referred to as the Joint Bodies throughout the Board’s Report with reference to their collective submission (Submission A33). These organisations, together with the Law Council of Australia and Corporate Tax Association are the membership bodies currently

303 Submission A10, 15.

304 Submission A09, 2.

305 Submission A37, 14.

represented on the ATO's National Tax Liaison Group (NTLG), a group operated by the ATO as a means of developing and improving the operation of the tax, super and registry systems.³⁰⁶

The role of the professional associations was highlighted in various submissions received to the Review with Koinly, for example, highlighting the need for professional associations to work with the ATO to provide education and upskilling to tax agents, including:

- educational links and materials to understand the nature and effect of crypto assets and transactions
- information addressing common scenarios involving crypto assets and transactions and the associated tax treatment
- common issues and misconceptions
- appropriate disclosures and checklists
- explanations on practical record keeping options, including software platforms and how they can be used by tax professionals
- questionnaires to obtain relevant information from clients.³⁰⁷

The Board notes that these organisations represent different market segments and interests, and that these and other industry bodies play an important role in educating and advocating on behalf of tax professionals.

Awareness and education

Taxpayer awareness

In the Terms of Reference for the Review, the Government asked the Board to consider retail and wholesale investor awareness of the tax treatment of digital assets and transactions. The majority of feedback received by the Board did not indicate that there was a significant difference between the challenges faced by retail and wholesale investors. It was however apparent through the consultation process that larger, sophisticated investors with access to advisors were more likely to be aware of and managing their tax obligations. Responses particularly noted that a lack of awareness at the retail level may be attributed to the large portion of retail investors that fit within a younger demographic with less experience of the taxation system. Notwithstanding this, the response required to address the awareness gap will benefit both the retail and wholesale investor market.

Swyftx provided feedback based upon their 2022 Annual Australian Crypto Survey results and noted in relation to crypto asset users that:

... they have a strong interest in understanding the treatment of crypto assets in Australia and a willingness to learn about aspects of the space relevant to their investment. This includes a desire to understand the tax treatment of the assets they hold, and how that tax treatment applies to the variety of use cases they might choose for those assets. This impression is

306 ['National Tax Liaison Group'](#), ATO (Web Page, 29 November 2023).

307 Submission A10, 24.

supported by the Swyftx Survey data that 61% of current crypto asset owners report a high to very high level of financial literacy, compared to 17% of people who have never owned crypto assets.³⁰⁸

This was consistently represented across the submissions, which highlighted issues including:

- the demographic of taxpayers and lack of awareness of tax obligations and operation of the tax system across the retail investor space³⁰⁹
- the burden on the industry as a result of wholesale investors seeking education from professional advisers as well as custody providers³¹⁰
- the need to improve awareness and understanding of tax obligations in relation to the taxation of crypto asset transactions³¹¹
- the challenges in accessing tax agents and the affordability of such services³¹²
- specific areas of law where there is a lack of awareness including personal use asset rules (relevant to capital gains tax), DeFi, GameFi, NFTs and DAOs.

The consistent and clear feedback provided through the submissions highlights the need for crypto asset users to have increased exposure to education and guidance on crypto asset taxation.

Observation 6.2

There is a general lack of community awareness of the tax treatment of crypto assets and transactions, particularly amongst retail investors (who are often from a younger demographic with little experience of the tax system), potentially leading to poor compliance and higher administration costs.

Education and guidance materials

A number of organisations have contributed to supporting crypto asset users in building awareness of and knowledge in relation to the resulting tax issues. The Board notes that many of the professional bodies have played an important role in recent years in providing crypto related content as part of their professional education development programs. Similarly, organisations associated with the tax profession or crypto industry, such as media publications, crypto tax software platforms and specialist practitioners, have

308 Submission A15, 2.

309 Submission A08, 14; Submission A09, 2; Submission A10, 13; Submission A19, 7; Submission A25, 2; Submission A30, 14; Submission A33, 23; Submission A36, 4; Submission A35, 4.

310 Submission A08, 15; Submission A38, 3.

311 Submission A09, 3.

312 Submission A27, 24; Submission A35, 4.

provided education through a variety of mediums. Several submissions to the Review highlighted the specific role that their own organisations have played in providing education and information.

The Board acknowledges the valuable contribution of these professional bodies and organisations in supporting the development of taxpayers' and tax intermediaries' crypto asset related tax knowledge.

Notwithstanding the fast-paced evolution of digital assets and transactions, the use of new terms to describe features and activities associated with these assets, the sharp increase in those taxpayers engaging with digital assets, and the complexity of the Australian tax system, each taxpayer (under self-assessment) must determine the appropriate tax treatments to apply. Given there is no one repository of this information and because of the emerging nature of tax interpretations in the crypto space, professional bodies, organisations and taxpayers rely heavily on pronouncements of the ATO in relation to the applicable tax treatments. Part of the ATO's role in administering the tax system is helping people understand their rights and obligations and improving ease of compliance.³¹³ Accordingly, the Board has considered the ATO's role in providing relevant public advice and guidance to support taxpayers and their intermediaries in complying with the law.

ATO guidance

The ATO is responsible for administering Australian federal taxation laws and elements of the superannuation law. A key role that the ATO undertakes is to support taxpayers in understanding their rights and obligations under these laws through the publication of advice and guidance.

The form and substance of ATO guidance featured heavily throughout submissions and consultation meetings for the Board's Review. Extensive feedback has been received acknowledging that the ATO has been a global leader in the breadth and quality of the public advice and guidance provided to support taxpayers who are transacting with crypto assets.³¹⁴ There has also been feedback that further work is required, and the Board has considered various aspects of ATO guidance (including the recent December 2023 website updates) throughout this chapter.

Promotion and publication of ATO guidance

The ATO produces advice and guidance in different forms across various channels. This includes through guidance published on the main ATO website, tools to connect with the community, including social media engagement on Facebook, LinkedIn and X (formerly Twitter) and moderation of a peer-to-peer platform, *ATO Community*, which is promoted as enabling users to drive conversations and find answers to their own tax and superannuation questions.³¹⁵

313 ['Who we are'](#), ATO (Web Page, 15 October 2018).

314 In PWC's submission (Submission A26, 14) they noted that the [PwC Crypto Tax Index](#), which is developed to compare the level of comprehensiveness of tax guidance between jurisdictions, showed that in 2021 Australia ranked only behind Liechtenstein in terms of the comprehensiveness of tax guidance available. This index does not appear to have been included in the 2022 report.

315 ['ATO Community About'](#), ATO Community (Web Page, 25 October 2021).

The Board has received feedback that the promotion of crypto asset tax guidance should be linked to channels utilised by those operating in the space (such as Discord, TikTok and X (Twitter)). The feedback also stressed the importance of accurate information being available through those channels.³¹⁶ In Koinly's submission to the Review, they noted:

Where ATO guidance is limited, retail investors seeking answers via google search are often presented with ATO community guidance forums. From a retail investor's perspective, it would be reasonable to assume that some reliance is placed on the ATO responses provided to queries. In our experience, the community guidance is contradictory and often opines on queries without due consideration of the facts and circumstances.³¹⁷

The Board notes that where the ATO is undertaking public engagement through any form of social media, a significant resource commitment is required to ensure that the content and engagement is appropriately moderated. Currently, ATO social media engagement is largely limited to Facebook, LinkedIn and X. The ATO has not indicated any intention to expand beyond these channels and the Board further notes the current government restrictions, particularly on the use of TikTok.

While the Board agrees that it is necessary for ATO guidance to be broadly accessible to the community segment it is targeted at, it does not agree that it is the role of the ATO to engage through every available public platform. There is also a role for professional associations, tax agents and crypto industry representatives to assist in providing education and guidance. Furthermore, there must be some responsibility on those transacting in this space to take steps to understand their taxation responsibilities where it is reasonable to do so.

Observation 6.3

Crypto asset users are engaging through a variety of platforms and there is an opportunity for these platforms to be used to share crypto asset tax guidance.

Publication of guidance

The ATO has published around 30 pages of crypto asset-related content across the ATO website. Many of these pages can be found through the ATO's 'Crypto asset investments'³¹⁸ landing page, which provides links to the following:

- What are crypto assets?
- Transactions – acquiring and disposing of crypto assets.

316 In Submission A08, 14, the Members of the Tax Profession referenced the limited number of professionals that seek to assist the crypto community via various channels such as Discord, TikTok and Twitter. The use of these forums was also highlighted by Oracle Accounting in Submission A25, 3; Cadena Legal in Submission A19, 22; and NotCentralised in Submission A35, 4.

317 Submission A10, 15.

318 '[Crypto asset investments](#)', ATO (Web Page, accessed 21 January 2024).

- How to work out and report CGT on crypto.
- Crypto chain splits.
- Crypto as a personal use asset.
- Decentralised finance and wrapping crypto.
- Keeping crypto records.
- Crypto asset glossary.

These pages, however, only represent just over half of the total crypto related web guidance available on the ATO website. Additional content is included across the website including in relation to crypto assets used in business, GST, SMSF investments and ATO data matching protocols for crypto assets.

The ATO have also published a separate page titled 'Crypto asset investments and tax',³¹⁹ located under the 'Information in other languages' section of the website. While the information contained on this page is relatively consistent with content on other areas of the website, some different detail is provided.

The Board considers that separate content in different locations may create confusion for users of the ATO website seeking to understand their obligations and that guidance would be improved through the inclusion of a purpose statement on each page detailing the relevant audience and ensuring there are linkages to other relevant content.

The Board understands that, in the interests of maintaining simple and accessible guidance, the ATO website will generally not include referencing to legislative or other materials that have been relied upon in determining the ATO's tax positions. The Board has heard, however, that due to the varied and emerging ways in which crypto assets may be transacted, this web guidance may be improved by including further detail and references to support the legal basis of the positions taken.

The Board has included a list of identified guidance as at the time of writing the Report in **Appendix C**.

The Board has undertaken an analysis of the guidance available on the websites of various jurisdictions and notes that the guidance provided by the UK HM Revenue & Customs (HMRC)³²⁰ and NZ Inland Revenue (NZ IR)³²¹ both consolidate crypto asset guidance into a single index, enabling the user to access the relevant content. The UK HMRC manual was specifically mentioned in submissions from the Joint Bodies and King & Wood Mallesons as a high-quality model for revenue authority guidance.³²²

The Board has provided further analysis in relation to guidance provided by other jurisdictions in Chapter 12.

319 ['Crypto asset investments and tax'](#), ATO (Web Page, 4 October 2022).

320 ['HMRC internal manual Cryptoassets Manual'](#), HM Revenue & Customs (Web Page, 21 August 2023).

321 ['Cryptoassets'](#), Inland Revenue (Web Page, accessed 21 January 2024).

322 Submission A33, 28; Submission A38, 4.

Recommendation 6.1

The Board notes that since its initial consultation, the ATO has increased the content available through its 'Crypto asset investments' landing page and has recently updated its website. In December 2023 the ATO launched a new ato.gov.au content split into the three main taxpayer audience groups. The Board commends the ATO for its work in this regard.

To ensure that users have access to all available information (including carrying on a crypto asset business and superannuation matters), the Board recommends that the ATO publish an index to all crypto asset related content on ato.gov.au, linking to the relevant guidance, similar to that utilised by the UK HMRC.

Recommendation 6.2

The Board understands that the ATO's new website Information Architecture should prevent duplication of content across the site with linkages where required.

The Board recommends that if similar guidance is still provided across different pages on the ATO website:

- a statement identifying the target audience of the page, for example, that the page has been developed to support taxpayers that do not have English as a first language
- links are provided to other guidance on the same topic included on other pages on the website.

Recommendation 6.3

The Board recommends that where new and novel transactions or assets are being addressed through ATO web guidance, to the extent possible and without jeopardising the language appropriate to the particular targeted audience, the ATO detail the legislative or common law precedents that have been relied upon to arrive at the ATO's position. This is particularly relevant in the crypto asset space, where limited precedential interpretations are available to taxpayers.

Transitory nature of guidance

The Board acknowledges that the ATO has made considerable efforts to update existing guidance and provide new guidance in relation to evolving positions on crypto assets and transactions. These updates have resulted in the provision of more detailed analysis, the inclusion of more examples, videos and updated positions. It has additionally resulted in the decommissioning of old content as it is replaced with new content. As noted above, due to the limited precedents in relation to the taxation of crypto asset

transactions, taxpayers and advisers are heavily reliant upon the ATO's published guidance. Taxpayers may take positions at a point in time based upon this guidance and in many instances will not retain a static copy of that guidance. When these materials are subsequently updated (as has been the case with a significant number of ATO crypto asset guidance pages), the earlier version is no longer available through the ATO website, and the only evidence that a change has occurred will be the 'Last modified' date at the bottom of the page. As PwC highlighted in their submission to the Board's review in relation to ATO guidance:

It is also frequently updated, and there is currently no mechanism for taxpayers and tax professionals alike to be notified of updates or to track the history of these changes.³²³

Again, the Board has looked to the UK HMRC guidance which provides a published history of all updates made to the crypto guidance.³²⁴ This list enables users to understand how the interpretations may have changed since the advice was relied upon, which may support substantiation of any positions taken should they be subject to an ATO inquiry or review.

An example of this was presented in EY's submission to the Review referencing the evolving position in relation to airdrops:

In March 2022 the ATO web guidance stated the market value of tokens received under an initial airdrop was ordinary income and required to be included in a taxpayer's assessable income.

On 7 September 2022 the ATO updated the web guidance to state tokens receive in an initial airdrop are not ordinary income except where the airdrop is of an established token.

The original published guidance has now been removed. Taxpayers who relied on the guidance that was available on the ATO website at 30 June 2022, and included the market value of tokens received under an initial airdrop of a new coin, may have overstated their taxable income and as a result, paid more tax than required under the current Australian tax law.³²⁵

Recommendation 6.4

UK HMRC guidance provides a published history of all updates made to their crypto guidance, so enabling users to identify guidance that may have changed and therefore positions that may require reconsideration, to understand how the guidance may have changed over time, and to support substantiation of any positions taken should they be subject to an inquiry or review.

The Board recommends that the ATO develop a similar capacity for taxpayers to be able to access earlier versions of the guidance and identify changes made, for the same reasons.

323 Submission A26, 15.

324 '[Updates: Cryptoassets Manual](#)', HM Revenue & Customs (Web Page, 21 August 2023).

325 Submission A20, 2.

Taxpayer protection for relying on guidance

Taxpayers are provided with varying degrees of protection and certainty depending on the type of ATO advice and guidance relied upon in arriving at a tax position. These protections are set out in Practice Statement Law Administration *PS LA 2008/3 Provision of advice and guidance by the ATO*. In the following, the Board sets out the different guidance products and how they are used within the crypto asset space.

Public rulings

Public rulings are binding on the Commissioner in that taxpayers can rely on the ruling and so avoid assessment for any tax shortfall, even if the ruling is incorrect.³²⁶ The ATO issued limited binding guidance in 2014 in relation to crypto assets addressing questions of whether bitcoin is foreign currency³²⁷, a CGT asset³²⁸, and trading stock,³²⁹ and whether the provision of bitcoin to an employee in respect of employment is a property fringe benefit³³⁰.

This is the only binding guidance that has been issued by the ATO specifically directed at crypto assets. There are, however, a number of other public rulings that concern more general subject matter which may be relevant to determining the Commissioner's views regarding the taxation of crypto transactions. An example is Taxation Ruling *TR 92/3 Income tax: whether profits on isolated transactions are income* (TR 92/3).

The ATO issues a variety of types of public rulings, including taxation rulings, taxation determinations (short form rulings), law companion rulings, GST rulings, miscellaneous taxation rulings, class rulings and product rulings. With the exception of product and class rulings, the ATO generally publish public rulings as drafts for comment prior to finalisation.³³¹

Product rulings and class rulings

Product rulings and class rulings are two types of binding rulings that may be issued by the Commissioner following an application from an entity.

Product rulings provide the ATO's opinion on the tax treatment of a specific arrangement (scheme) and generally relate to an investment scheme or similar product. These rulings are:

- issued to, or on behalf of, the entity that is the promotor of the arrangement
- for a class of entities – those who invest in the product

326 ATO, *Provision of advice and guidance* ([PS LA 2008/3](#), 7 May 2020) [20].

327 TD 2014/25 (n 267).

328 TD 2014/26 (n 246).

329 ATO, *Income tax: is bitcoin trading stock for the purposes of subsection 70-10(1) of the Income Tax Assessment Act 1997?* ([TD 2014/27](#), 17 December 2014) ('TD 2014/27').

330 ATO, *Fringe benefits tax: is the provision of bitcoin by an employer to an employee in respect of their employment a property fringe benefit for the purposes of subsection 136(1) of the Fringe Benefits Tax Assessment Act 1986?* ([TD 2014/28](#), 17 December 2014) ('TD 2014/28').

331 '[Public rulings](#)', ATO (Web Page, 6 May 2019).

- for a specified arrangement – the details and agreements constituting the product
- on specified tax laws.³³²

Class rulings provide advice on the tax consequences of a scheme for a specific class of people. A class ruling may be issued in circumstances such as an employer seeking advice on events relating to a class of employees, however will not be provided in relation to investment schemes and similar products as product rulings are issued for this purpose.³³³

The Board has not examined the role of these particular ruling types, however notes that they may play a more significant role once regulatory reform has taken place in the crypto asset space.

Private rulings

The ATO provides a Private Binding Ruling (PBR) to a taxpayer who applies for a PBR in relation to a specific set of facts. PBRs bind the Commissioner if the ruling applies to an entity (i.e. is given in response to an application by, or behalf of, that entity), and that entity relies on the ruling.³³⁴

The ATO will often publish an edited version of a PBR through the ATO Legal Database. While the edited versions of PBRs may indicate the ATO view in respect of a relevant matter, the extracts are edited, do not necessarily disclose all relevant facts, and cannot be relied on. The ATO states:

The edited versions of written binding advice we publish can't be relied on by taxpayers or their advisers in any way.

We do not update edited versions for changes in the law or changes in the way we apply the law.

They can't be relied upon as precedent or used for determining how we will apply the law. The records are not binding and provide no protection (from having to pay underpaid tax, penalty or interest).

In addition, an edited version of binding advice is not an authority for the purposes of establishing a reasonably arguable position.³³⁵

Notwithstanding this, stakeholders to the Review have highlighted that the information in these PBRs provide specific details of transactions and the application of law and are often more useful to advisers than the generic web guidance. Swyftx noted:

... a majority of in-depth analysis is presented in the ATO's legal database which includes exceptionally useful insights in forms ranging from public rulings to edited private advice. We

332 ['Product rulings'](#), ATO (Web Page, 7 September 2016).

333 ['When to consider applying for a class ruling'](#), ATO (Web Page, 2 September 2021).

334 ATO, *Provision of advice and guidance (PS LA 2008/3)*, 7 May 2020) [114]–[115].

335 ['Publishing of private rulings'](#), ATO (Web Page, 7 May 2018).

think retail consumers would benefit from the transposing of key insights in this database to a more easily digestible form.³³⁶

The Board has identified over 100 edited versions of private advice published by the ATO in relation to crypto assets, covering a variety of topics including capital/revenue treatment of crypto asset transactions, CGT exemptions, specific transactions and arrangements, TOFA and GST issues. Some of these PBR decisions cover areas of crypto taxation that are not addressed in publicly available guidance, such as TOFA. The Board has provided a listing of the identified published edited advice in **Appendix C**.

Web-based content

The ATO has issued extensive further guidance in the form of web-based content which has been expanded and modified over time. Where this guidance has been relied upon and is later found to be incorrect or misleading, the ATO has indicated that a taxpayer will be held liable for the tax, but protected from any false or misleading statement penalty that may apply.³³⁷

The Board understands that the ATO can issue web-based guidance much faster than binding forms of guidance, and easier language and examples can be used through these products. Additionally, the Board notes that the use of examples and video content throughout the website are valuable tools in delivering guidance products to the community. The ATO has advised that web guidance is the main way they can quickly get messaging out to the market about emerging crypto asset tax positions. Additionally, the ATO have advised that it would only be in extraordinary circumstances that an officer would not follow website guidance, in other words the ATO will in most instances stand by the positions taken in this guidance, however the Board notes that this default position does not appear to be explicitly published or stated by the ATO.

Binding versus non-binding guidance

The Board has received various feedback in relation to the ATO's approach to predominately delivering guidance in the form of non-binding website guidance. The Joint Bodies (for example) stated in their submission to the Review:

Given the general lack of understanding around the taxation of digital assets and transactions in the community, it is all the more crucial that taxpayers and tax practitioners have access to binding ATO guidance on which they can rely to ensure they are afforded certainty and can appropriately manage their tax affairs.³³⁸

KPMG similarly recommended that the ATO must be sufficiently resourced to be able to provide guidance in the form of binding rulings and that:

336 Submission A15, 2—3.

337 ATO, *Provision of advice and guidance* ([PS LA 2008/3](#), 7 May 2020) [214].

338 Submission A33, 20.

The ATO should provide detailed guidance to taxpayers and tax advisors in the form of binding rulings. The publication of website guidance is not conducive to taxpayer compliance and does not give certainty of tax outcomes.³³⁹

From discussions with international jurisdictions, including NZ, UK and US, the Board understands that it is common practice for revenue authorities to utilise web-based guidance. While this does not formally bind the revenue authority, the default presumption of the authority is that the positions in the guidance are upheld. The ATO's approach is therefore consistent with international practice.

The Board explored the use of binding and non-binding guidance with its Working Group and concluded that significant factors driving the stakeholder push for greater binding guidance to be issued by the ATO are:

- the transitory nature of the existing guidance
- the inability of taxpayers to access earlier versions of guidance
- the absence of legislative or other precedential references provided in website guidance.

These issues have been explored and addressed in recommendations throughout this chapter. The Board understands the need for the ATO to be able to issue and develop guidance in a timely manner in relation to this dynamic industry through the use of web-based guidance.

Scope and depth of guidance

The Board received both general and specific feedback in relation to areas of ATO guidance that should be improved or developed to support taxpayers in meeting their tax obligations. A common theme in relation to areas where guidance could be improved related to specific crypto events and at the protocol or crypto asset category level.³⁴⁰

The Joint Bodies noted:

Some members of the Joint Bodies have suggested that the ATO could provide guidance on the tax implications of the 50 most common digital asset transactions. This could serve as a starting point for taxpayers with questions about frequent and common transactions in the blockchain space.³⁴¹

The Board's Report highlights various areas where a lack of certainty exists in relation to the application of the tax law to crypto asset transactions. The relative priority of these issues will have shifted throughout the period that the Review has been undertaken and continue to change with the rapid evolution of the crypto asset ecosystem. Importantly, the Board notes the additional content that has been added to the ATO website throughout this period.

339 Submission A30, 5.

340 Submission A36, 3; Submission A10, 14.

341 Submission A33, 36.

The Board considers that there is a need for the crypto asset community and tax profession to engage with the ATO to identify areas for prioritisation in relation to development of crypto asset guidance (see 'Crypto Industry Working Group' in next section).

Support and resourcing

As has been set out through this chapter, the Board notes the important role that the tax profession and crypto asset community play in ensuring that tax obligations are understood and met by crypto asset users. The engagement of these groups throughout the Board's Review has highlighted the value and importance of their role within the tax system.

The role of these various groups featured heavily throughout submissions, with many submissions proposing the establishment of a consultative working group to support the ATO in appropriately developing and targeting education and compliance resources in the crypto asset space.

In their submission, the Joint Bodies proposed that implementation of their recommendations:

... must be undertaken as a coordinated response involving Treasury, relevant government bodies (such as the ATO, ASIC and Austrac), in consultation with external stakeholders. For this reason, we consider that a consultative forum should be established to review and discuss the administrative approaches and needed legislative reform on an ongoing basis. We envisage that this forum would consist of the Board, relevant government bodies (such as the ATO, ASIC and Austrac), Treasury, industry experts and representatives of the professional bodies. Noting that substantive legislative changes may be needed, a forum which holistically considers issues and potential solutions will ensure that a cohesive and collaborative approach is taken.³⁴²

Similar feedback in relation to engagement with this community was echoed in submissions from KPMG, King & Wood Mallesons, Cadena Legal, The Law Council of Australia, Blockchain & Digital Assets – Services + Law and FinTech Australia.³⁴³

The Board has highlighted a number of areas that require development and consider that consultative engagement with the tax profession, industry and relevant government-related participants (potentially including ASIC, Treasury and/or AUSTRAC) will ensure that the ATO is supported in appropriately targeting the needs of the crypto asset community and tax profession.

To facilitate such consultative engagement, the Board recommends that the ATO arrange a forum for a regular consultation with relevant stakeholders. The detail of the consultation format would best be determined by the ATO having regard to its other consultative formats and forums, but the Board recommends that the consultation be timetabled regularly, and involve a constant membership.

The Board has referred to this proposed consultative forum as the *Crypto Industry Working Group*.

342 Submission A33, 3.

343 Submission A30, 3; Submission A38, 5; Submission A19, 2; Submission A39, 6-7; Submission A27, 28; Submission A37, 14.

The Crypto Industry Working Group would be tasked with working with and supporting the ATO in identifying the priority needs of the crypto asset community in relation to guidance and administration matters. It would be a consultative body to provide specialist support to the ATO in relation to this evolving space. It would not have any authority or any decision-making power, but rather would provide the ATO with access to a group of industry stakeholders to assist the ATO to become aware of emerging crypto developments and issues (including tax issues) in 'real time'.

Recommendation 6.5

In view of the constantly and quickly changing and developing nature of the crypto ecosystem, the Board recommends the ATO establish regular consultative engagement on crypto with participants from the tax profession, industry, and potentially relevant government departments and/or entities. The Board has referred to this engagement as the 'Crypto Industry Working Group', but the specific arrangements would be a matter for the ATO. The Crypto Industry Working Group would be advisory only, with no formal authority.

Chapter 7: Income Tax – General Principles

Key Points

- The capital/revenue characterisation of crypto asset profits and gains should be determinable by common law principles. However, there is currently some uncertainty as to how these principles will apply in some circumstances, due to the unique features of crypto assets and transactions and the fact that the crypto ecosystem is new and continually developing with currently no or limited specific judicial guidance.
- Losses from crypto transactions on revenue account may be offset against other, unrelated, income (such as salary income) whereas capital losses can only be offset against capital gains. Whether revenue losses from crypto transactions should be quarantined by changing the legislation is a matter of policy for the Government.
- Current tax law in the areas of capital gains tax, source and valuation should also be sufficient to address crypto transactions, however once again there is some uncertainty at this stage as to how they will apply with currently limited or no judicial guidance.
- In these circumstances, it is appropriate that the ATO give detailed guidance upon which taxpayers can rely so that taxpayers can ensure that their tax disclosures will be acceptable to the ATO.

Introduction

Chapters 7, 8 and 9 of this Report contain the Board’s consideration of the current Australian taxation treatment of digital assets and transactions, and emerging tax policy issues.

In this Chapter 7, the Board considers taxation treatment of digital assets and transactions under general income tax law principles. These cover the characterisation of profits and gains as either ordinary income or capital, trading stock issues, Australia’s capital gains tax, and issues relating to source and valuation. This analysis is undertaken by first explaining these general income tax law principles, and then considering how they apply to digital assets and transactions. Observations and recommendations are made throughout the chapter.

Chapter 8 then considers the application of some specific taxation regimes to digital assets and transactions.

Chapter 9 furthers the Board's consideration of the current Australian taxation treatment of digital assets and transactions by focussing on common digital asset transactions and how these are taxed under Australia's current tax law, and then considering whether this is appropriate or whether change is required. Chapter 9 identifies these common digital asset transactions by reference to the typical lifecycle of digital assets.

Background

There currently are no legislative provisions dealing specifically with the taxation of crypto assets,³⁴⁴ as noted in a number of submissions to the Board.³⁴⁵

It follows from this that the taxation of crypto assets and transactions is determined by legislation that was designed and implemented without particular regard to crypto assets (and in most cases before crypto assets were developed). A consideration for the Board is, therefore, whether the existing framework is 'fit for purpose' where crypto assets and transactions are concerned. This requires an understanding of the existing general tax framework.

This chapter, therefore, commences with an overview of the foundational issues relevant to Australia's tax framework, before considering how these operate in relation to crypto assets, and particular issues that are currently being faced by taxpayers and their advisers in this context.

The conclusion of the Board in this chapter is that the current general framework is broadly 'fit for purpose' in that it has not been shown that the existing law is not capable of applying to digital assets and transactions. Rather than an inability of the existing general framework to apply to crypto assets and transactions, the issues faced by many taxpayers are largely attributable to the lack of understanding as to how existing legislation and judicial precedent apply in this newly-developing area. In these circumstances, the Board has noted taxpayers' need for ATO guidance upon which they can rely for the purposes of making taxation disclosures that taxpayers can be confident will be acceptable to the ATO.

344 Apart from legislative confirmation that crypto assets are not foreign currency (see Chapter 4), and the GST treatment of digital currency (see Chapter 10).

345 In Submission A30, 14–15, KPMG commented that 'overlaying this, the current approach to crypto asset tax regulation thus far has mainly been provided by tax authorities in the form of published guidance on the tax treatment of crypto assets within existing statutory frameworks, and in some cases, the enactment of statutory provisions to include definitions of 'crypto assets' within current statutory frameworks (for example, in NZ)'. There have been fewer instances where statutory frameworks have been implemented that are specific to crypto assets. In Submission A20, 2, EY stated: 'Currently there are no specific provisions under the *Income Tax Assessment Act 1997* (ITAA 1997) which deal with the taxation of cryptocurrency and or digital assets in Australia. Rather, in Australia cryptocurrency is typically taxed under the general provisions both as a capital asset and as ordinary income'. In Submission A33, 21, the Joint Bodies stated that 'the legal and regulatory framework should set out how distinctive characteristics of digital assets and transactions may impact their tax treatment'.

Existing taxation framework

A taxpayer's tax payable is calculated on the basis of their taxable income, which is their assessable income (including capital gains, where applicable) less allowable deductions. Australia's taxation laws contain the provisions that establish what is assessable income and what are allowable deductions.

Different provisions in Australia's existing taxation framework have potential application to the taxation of crypto assets. Without intending to be exhaustive of the range of potential taxation provisions that may apply, the Board (consistent with submissions to it) considers the general provisions dealing with the following as being particularly relevant to the taxation of crypto assets:

- ordinary income
- trading stock
- capital gains tax
- taxation of financial arrangements
- deductions
- treatment of losses
- source
- valuation.

The following provides an overview of these provisions and related principles. It is noted that issues associated with the following other specific taxation regimes are referred to in Chapter 8:

- managed investment trusts
- superannuation funds
- fringe benefits tax
- the not-for-profit sector.

Ordinary income

Under Australian income tax law, the general position is that taxpayers are taxed on taxable income which comprises assessable income less allowable deductions.³⁴⁶ Assessable income in turn comprises income according to ordinary concepts (ordinary income) and statutory income.³⁴⁷

Therefore, fundamental to the Australian tax system is the concept of ordinary income. Whilst ordinary income is neither defined nor explained in the legislation, an extensive body of case law addresses this

346 ITAA 1997 sub-ss 4–10(2), 4–15(1).

347 ITAA 1997 s 6–5 includes income according to ordinary concepts in a taxpayer's assessable income; ITAA s 6–10 includes statutory income in a taxpayer's assessable income.

question. Significantly, income can only be ordinary income if it is characterised as being on revenue account rather than on capital account.

Ordinary income in the course of carrying on a business

Where a taxpayer is carrying on a business, a gain from a transaction that is conducted in the ordinary course of the business will be ordinary income (i.e. on revenue account). Hence fees for services are assessable (and expenses incurred to derive those fees are deductible).³⁴⁸ The profit on disposal of assets in the ordinary course of business may also be assessable on revenue account.³⁴⁹

Ordinary income from a capital asset

Where a return paid on an asset has the characteristics of ordinary income, such as periodicity, recurrence or regularity, such amount will be ordinary income and so included in the taxpayer's assessable income.³⁵⁰

The Board notes that there are circumstances in which a taxpayer may receive a return on a holding of crypto assets, such as a staking reward. Notwithstanding the application of the capital/revenue principles that may apply in relation to the underlying crypto asset, where a return paid on a crypto asset has the characteristics of ordinary income, such as periodicity, recurrence or regularity, such amount will be included in the taxpayer's ordinary income.³⁵¹

As would be the case with any asset where a return is derived, the taxation of income earned on an asset does not determine the taxation treatment of any ultimate profit or loss on disposal of the underlying asset. Hence, a taxpayer may have the obligation to declare returns on crypto assets on revenue account, whilst still holding the underlying assets on capital account and being subject to capital gains tax (see below) on disposal. This is consistent with the ATO's current guidance on staking rewards.³⁵²

Ordinary income from isolated transactions

An isolated transaction that is not entered into as part of a business conducted by a taxpayer, may still give rise to ordinary income. The key authority is the High Court decision in *Commissioner of Taxation v Myer Emporium Ltd* [1987] HCA 18 (Myer Emporium). In that case it was held that a receipt may constitute income if it arises from an isolated business operation or commercial transaction entered into otherwise than in the course of carrying on the taxpayer's business, so long as the taxpayer entered into the transaction with the purpose of making a profit or gain from the transaction.

348 ITAA 1997 s 8-1, provided no exception (such as the exception for capital expenditure) applies.

349 *London Australia Investment Company Limited v Federal Commissioner of Taxation* (1977) 138 CLR 106.

350 ITAA 1997 s 6-5.

351 ITAA 1997 s 6-5.

352 [‘Staking rewards and airdrops’, ATO \(Web Page, 30 June 2023\)](#).

The Commissioner's views in relation to the application of the principles in the *Myer Emporium* decision are set out in TR 92/3, where the Commissioner states that following *Myer Emporium*, a profit from an isolated transaction is generally income when both of the following elements are present:

- the intention or purpose of the taxpayer in entering into the transaction was to make a profit or gain
- the transaction was entered into, and the profit was made, in the course of carrying on a business or in carrying out a business operation or commercial transaction.

An amount that is not ordinary income may still form part of a taxpayer's assessable income to the extent that it is statutory income, with an extensive list of provisions establishing assessable statutory income amounts.³⁵³

Trading Stock

Where a business involves trading stock, the trading stock rules in Division 70 of the ITAA 1997 will apply. Relevantly, trading stock is defined as 'anything produced, manufactured or acquired that is held for the purposes of manufacture, sale or exchange in the ordinary course of a business'.³⁵⁴ Where the trading stock measures apply:

- the cost of acquiring trading stock is generally deductible
- the proceeds from selling trading stock are generally assessable as ordinary income
- where trading stock is on hand at the end of a year of income, the trading stock is generally required to be valued in accordance with specific rules. Under those rules, the value of the trading stock on hand at the start and end of the income year is compared. Where the value of trading stock at the end of the year of income exceeds the value at the start of the year of income, the difference is included in assessable income. Where the value of trading stock at the end of the year of income is less than the value at the start of the year of income, the difference gives rise to a deduction.³⁵⁵

The trading stock measures therefore generally ensure that the deduction for the cost of an item of trading stock occurs in the same year that the proceeds for the disposal are recognised. Importantly, the trading stock measures are only relevant to taxpayers that carry on a business.

Capital Gains Tax

Transactions that are regarded as being on capital account are generally subject to taxation under the CGT measures in Part 3-1 of the ITAA 1997.

353 A guide to the provisions in relation to statutory income is set out in ITAA 1997 s 10-5 and includes capital gains tax provisions.

354 ITAA 1997 sub-s 70-10(1).

355 ITAA 1997 s 70-35.

Under Part 3-1 and in summary, a capital gain or capital loss only arises where a CGT event takes place. CGT events are listed in Division 104 of the ITAA 1997. Most CGT events involve a 'CGT asset' but this is not always the case.

CGT event A1 is a key CGT event that deals with the disposal of a CGT asset, however the Board notes that other events may apply where an asset is created, lost or destroyed. In summary, a disposal for the purposes of CGT event A1 refers to a change of ownership in the relevant CGT asset, except where there is no change in beneficial ownership.³⁵⁶

Where the CGT rules apply, the calculation of the relevant capital gain or capital loss is determined based on specific rules. For many CGT events, a capital gain or capital loss is determined by comparing the cost base (or reduced cost base) of the asset with the capital proceeds from the CGT event. The rules prescribe the items that are included in the cost base (or reduced cost base) and capital proceeds. These rules differ as between different CGT events.

Given other taxation rules may also have application, certain exemptions and 'anti-overlap' rules are included to avoid multiple provisions having application to the same transaction.

Under the CGT rules, a significant measure is the ability to treat a capital gain as a *discount capital gain*. This treatment is generally only available to Australian resident individual, trustee or superannuation fund taxpayers: the CGT discount is generally not available to corporate or non-resident taxpayers. In summary, where relevant eligibility criteria are met, including that the underlying asset has been held for more than 12 months³⁵⁷, a capital gain (after the application of any available capital losses) is reduced by up to 50%³⁵⁸.

Capital gains are a type of statutory income that is included in assessable income. Where a taxpayer makes a capital loss, these can only be offset against capital gains. Where a taxpayer makes net capital losses in a year, these are carried forward and can be offset against capital gains in future years.

Taxation of financial arrangements

While the principles set out above generally apply to determine the appropriate taxation treatment of gains and losses, certain taxpayers may be required, or elect, to apply the provisions in Division 230 of the ITAA 1997 in relation to the taxation of financial arrangements (TOFA).

The TOFA rules apply to all 'financial arrangements' as defined (noting that certain financial arrangements are expressly excluded) and any gains made under a financial arrangement are assessable and any losses are deductible. Division 230 of the ITAA 1997 provides a range of elective methods for determining gains and losses. Where these elective methods are not adopted, the default methods (being either the accruals or the realisation method) apply.

356 ITAA 1997 s 104-10.

357 ITAA 1997 s 115-5.

358 The discount percentage is set out in ITAA 1997 s 115-30 as 50% for an individual and trust and 33 1/3% for a complying superannuation fund (subject to some exceptions).

The TOFA rules do not apply to all taxpayers. The general position is that gains or losses from financial arrangements that arise to entities that do not satisfy specified threshold tests are not subject to TOFA. It is, however, possible for an entity that is not mandatorily subject to TOFA to elect into the regime.

Deductions

In conjunction with determining the appropriate treatment of profits or gains from digital assets and transactions, taxpayers will need to determine the appropriate treatment of expenditure incurred in connection with their crypto asset activities.

The Board notes in this regard that the ATO does not provide any specific public guidance in relation to deductions for crypto asset activities on the main web page or binding rulings.

There should be no difference in the deductibility of expenses relating to crypto asset activities to that of non-crypto asset activities. A taxpayer may be entitled to a general deduction for a loss or outgoing to the extent that it is incurred in gaining or producing assessable income or is necessarily incurred in carrying on a business for the purpose of gaining or producing assessable income. However, an item of expenditure cannot be deducted to the extent that it is capital, private or domestic in nature; incurred in relation to gaining or producing exempt income or non-assessable non-exempt income; or prevented from being deductible under a provision of the income tax legislation.³⁵⁹

Crypto asset users may incur a variety of expenses relating to their activities (such as interest on loans in fiat currency to acquire digital assets) and the ordinary rules of deductibility will apply. While taxpayers transacting with crypto assets may incur many similar expenses to other taxpayers, such as investment adviser fees, record keeping costs and transactional fees, the unique nature of crypto assets means that these taxpayers may incur costs that are particular to crypto assets. For example, taxpayers undertaking mining activities incur significant energy costs. Visual Capital estimated that in July 2022, the cost to mine one bitcoin in Australia was USD 40,623 resulting in an estimated loss for each bitcoin mined of over USD 20,000 at that time.³⁶⁰ To the extent that a taxpayer is carrying on a business of mining activities for the purpose of making a profit, the taxpayer would be entitled to a deduction for these costs under the general deduction provisions, unless those costs are capital in nature and part of the cost of acquiring a CGT asset being a crypto asset in which case they would be included in the cost base of that asset).

To the extent that a taxpayer is carrying on activities in the nature of a hobby, they will not be entitled to any deduction for expenditure incurred in relation to their activities.

Expenditure that is characterised as being on capital account is not an allowable deduction, but may be included in the cost base of a capital asset for the purposes of the CGT regime and, if the cost base exceeds capital proceeds, there will be a capital loss.

359 ITAA 1997 s 8-1.

360 Carmen Ang, [‘The Cost of Mining Bitcoin in 198 Different Countries’](#), *Visual Capitalist* (Web Page, 5 August 2022).

Treatment of Losses

A tax loss arises where total deductions in a year exceed assessable income. Subject to the satisfaction of specific loss rules, tax losses are carried forward to be offset against assessable income in future years.

A significant difference between a crypto asset being held on revenue account compared with being held on capital account, is the treatment of losses.

This issue is particularly relevant where crypto asset holdings are concerned because of the price volatility. While high gains can be realised, high losses can also be made.

Where a crypto asset is held on revenue account, any loss on disposal will be characterised as a revenue loss and will be deductible against assessable income (regardless of the type of assessable income) in the calculation of taxable income. For example, any loss on disposal of a crypto asset held on revenue account could be offset against the holder's salary income.

Where a crypto asset is held on capital account, any loss on disposal will be calculated under the CGT provisions and will be a capital loss. Specific rules apply to utilising capital losses. Capital losses can only be used to reduce a current or future year capital gain calculated under the CGT provisions, that is, capital losses are 'quarantined'. Further, when a capital loss is used, it is applied to gross capital gains prior to the application of any discount.

Source

Background

The assessable income of an Australian resident includes income derived directly or indirectly from all sources. Conversely, non-resident taxpayers are generally taxed only on income from Australian sources or income that a provision deems assessable on some other basis.

This position may be impacted by the operation of a Double Taxation Agreement (DTA), which provides specific rules allocating taxing rights for certain types of income and may also include deemed source rules to give effect to those allocations.

The importance of this issue of source was highlighted in submissions to the Review.

Legislation

The source of income is generally determined by reference to common law principles.³⁶¹

Case law has consistently highlighted that determination of source is based upon the relevant facts of each case, as highlighted by Isaacs J in *Nathan v FC of T* (1918) 25 CLR 183 at p 189:

The Legislature in using the word 'source' meant, not a legal concept, but something which a practical man would regard as a real source of income. Legal concepts must, of course, enter into the question when we have to consider to whom a given source belongs. But the ascertainment of the actual source of a given income is a practical, hard matter of fact. The Act, on examination, so treats it.

Valuation

A significant complexity in establishing the appropriate taxing framework for crypto assets is identifying what amounts are subject to tax. Across areas of the traditional economy, identification and quantification of taxing events may be undertaken by reference to settlements that are denominated in money (i.e. the Australian dollar). With crypto assets however, transactions may be settled without reference back to a fiat currency, with crypto assets being used in direct exchange for goods, services and other crypto assets.

In Australian tax law, there are a variety of means (some legislative and some established by common law principles) that deal with the taxation of transactions that occur in a 'non-cash' form. A question is whether these are sufficient to deal with the taxation treatment of crypto assets.

Can non-cash transactions give rise to ordinary income?

A transaction that does not involve cash will not for that reason alone fail to be income. In the case of *Californian Copper Syndicate (Limited and Reduced) v Harris* (1904) 5 TC 159, mining interests were sold in exchange for shares in the buyer and it was held that profit based on the value of the shares was assessable. Lord Trayner said (at 167–168): 'It was said that the profit – if it was profit – was not realised profit and, therefore, not taxable. I think the profit was realised. ... the shares were realisable and could have been turned into cash.'

361 Whilst 'Australian source' is defined in ITAA 1997 s 995-1, this states that the definition does not limit the meaning of the phrase, but simply includes income derived from an Australian source for the purposes of the ITAA 1936. There are, however, a limited number of statutory source rules for particular types of income found in the ITAA 1936. Where none of these statutory rules apply, it is necessary to determine the source of an item of income according to principles that have evolved from common law. If relevant, it is also necessary to turn to the applicable tax treaty/Double Taxation Agreement, as many treaties contain source rules.

This outcome is consistent with section 21 of the *Income Tax Assessment Act 1936* (ITAA 1936), which states:

Where, upon any transaction, any consideration is paid or given otherwise than in cash, the money value of that consideration shall for the purposes of this Act be deemed to have been paid or given.

However, a key characteristic of ordinary income is the ability for it to be convertible into money or money's worth. In *FC of T v Cooke & Sherden* 80 ATC 4140, Brennan, Deane and Toohey JJ, in a joint decision of the Full Federal Court in relation to ITAA 1936, stated (at pp 4147–4148):

... The notion that the items of income are money or are to be reckoned as money accords with the ordinary concepts of income as 'what comes into (the) pocket' to adapt Lord Macnaghten's phrase in *Tennant v Smith* (1892) AC 150 at p. 164. That is not to say that income must be received as money; it is sufficient if what is received is in the form of money's worth... Nor is it necessary that an item of income be paid over to the taxpayer: it is sufficient, according to ordinary concepts and usages, that it be dealt with on his behalf or as he directs...

However, in *Cooke & Sherden* the Court found that an incentive given to a contractor in the form of a non-transferrable holiday was not assessable income because it was not money or capable of being turned to pecuniary account. Their Honours said (at 4148):

If a taxpayer receives a benefit which cannot be turned to pecuniary account, he has not received income as that term is understood according to ordinary concepts and usages.

The decision in *Cooke & Sherden* led to the introduction of section 21A into the ITAA 1936. Section 21A specifically addresses the concept of convertibility to cash enabling an amount to be treated as convertible cash, even where it is not, where it is a non-cash business benefit. Property or services provided after 31 August 1988 are non-cash business benefits where they are wholly or partly in respect of a business relationship or wholly or partly for or in relation directly or indirectly to a business relationship. In these circumstances, s 21A attributes the 'arm's length value' (as defined) to the non-cash business benefit.

Specific provisions requiring valuations

Many areas of the income tax law expressly deal with the situation where some form of property, rather than money, is provided or received. These provisions include:

- **Capital gains tax**

The core concepts in the CGT provisions dealing with cost base and capital proceeds refer to 'money ... or the market value of any property'.³⁶²

'Property' is also important to determining the meaning of 'CGT asset', which is defined to mean '(a) any kind of property; or (b) a legal or equitable right that is not property'.³⁶³

362 ITAA 1997 paras 110-25(2)(b), 116-20(1)(b) respectively.

363 ITAA 1997 s 108-5.

- **Deductible gifts**

Different treatment is applied in relation to deductions for donations, subject to whether the donation is made in money, property, trading stock or listed shares. Notably, where a donation of property (including trading stock) is made, the available deduction is determined based upon the length of time that the taxpayer held the property prior to the donation and the value of the property.

- **Fringe benefits**

The provision of property to an employee or associate of an employee may constitute a property fringe benefit.

- **Superannuation**

Property is relevant in relation to what a superannuation fund may invest in, including the application of the in-house asset rules. Additionally, the existence of property is relevant for the purposes of how a contribution may be made to a superannuation fund³⁶⁴ or how a fund must calculate and pay benefits to members.³⁶⁵

ATO guidance regarding the taxation of crypto assets

In Chapter 6, The Board has set out the guidance that has been issued by the ATO in a binding form.

The majority of guidance has been issued on the ‘individuals and families’ page of the ATO website, where general non-binding information is included on how to treat investments in crypto assets for Australian tax purposes. The materials are stated to assist in determining *How to treat investments in crypto assets (also called crypto or cryptocurrency) for tax purposes in Australia* and cover matters including:

- What are crypto assets?
- Transactions – acquiring and disposing of crypto assets.
- How to work out and report CGT on crypto.
- Crypto chain splits.
- Crypto as a personal use asset.
- Decentralised finance and wrapping crypto.
- Keeping crypto records.
- Crypto asset glossary.³⁶⁶

The Board notes that focus of the ATO guidance materials is that the appropriate tax treatment for crypto asset transactions is either:

- under the capital gains tax provisions

364 ITAA 1997 s 285-5.

365 For example, under *Superannuation Industry (Supervision) Regulations 1994* (SIS Regulations) pt 6.

366 ‘[Crypto asset investments](#)’, ATO (Web Page, accessed 21 January 2024).

- as trading stock in carrying on a business.

Notably, the ATO has provided limited guidance in relation to the circumstances where crypto assets are not trading stock to the owner, but the profit or gain on those transactions are properly characterised as being on revenue account (such as in *Myer Emporium* and *London Australia Investments*).

Board's Consideration

In accordance with the terms of reference for the Review, the Board has explored the current Australian taxation treatment of crypto assets and transactions and emerging tax policy issues; the taxation of digital assets and transactions in comparative jurisdictions; whether the current taxation framework is adequate to deal with crypto assets and transactions or whether legislative intervention may be required; and whether any changes to Australia's administration are warranted in the context of digital assets and transactions.

This section explains the Board's conclusions and recommendations in relation to more general income tax matters outlined above.

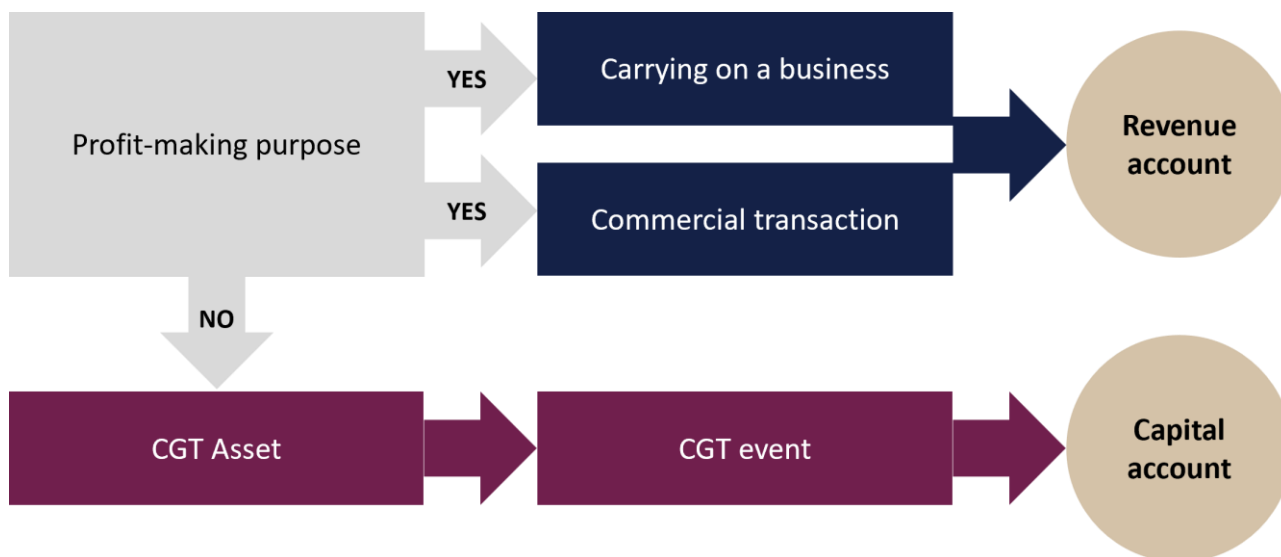
Ordinary income and trading stock

Crypto assets and transactions are not immune to the challenges of determining the appropriate capital/revenue treatment of associated receipts. The Board has received some submissions that the particular features of crypto assets and transactions may be so unique and complex that the revenue/capital question cannot be definitively resolved based upon existing common law. These submissions highlighted the complexity and uncertainty experienced by crypto asset users and their advisers in making these classifications.

In particular, the following issues have arisen:

- The particular indicia that may be present to demonstrate that a business is being carried on in relation to crypto assets, and the resulting treatment on revenue account.
- Where a transaction has been entered into with a profit-making purpose, but the activities of a taxpayer do not amount to carrying on a business, the indicia that may demonstrate that the transaction should still be treated on revenue account.
- Where any profit or gain is not on revenue account, the application of the CGT regime to the transaction, including consideration of:
 - when a crypto asset may be categorised as a CGT asset
 - the application of CGT events to crypto assets and transactions, including timing issues
 - determination of the cost base and capital proceeds of a crypto asset, including valuation issues.

The following diagram illustrates the structure of the Board’s consideration of this issue:



Carrying on a business

Background

Businesses may be carried on by all types of taxpayers, covering the full spectrum of activities within the economy. Physical businesses, such as retail stores, professional services firms, hospitality operations are all easily identifiable as such and there is limited challenge in identifying the existence of a business operation being carried on in these instances.

Complex issues can arise in establishing that a business is being undertaken where the activities may straddle concepts of investing or hobby-based activities. Areas of contention regularly arise in relation to primary production operations, share trading, rental property letting and short-term accommodation. With the increasing prevalence of people using crypto assets, taxpayers are now grappling with the classification of crypto asset activities and where this may cross the line into that of a business operation.

In general terms, where activities are being undertaken with a profit-making intention in a regular, repetitive operation in a ‘business-like’ manner, these activities will most likely amount to the carrying on of a business.

Carrying on a business – ATO guidance

The ATO provides general web guidance in relation to when a taxpayer’s activities may amount to carrying on a business³⁶⁷ including a series of steps to assist in determining if a business is being carried on. These steps require the taxpayer to identify all relevant, related activities and then determine if those activities are a business, by considering various indicia.

367 [‘Are you in business?’](#), ATO (Web Page, 29 March 2023).

The relevant elements that may be determinative of carrying on a business have been established across extensive case law and the ATO provides a summary of these factors in Taxation Ruling [TR 97/11](#) *Income Tax: am I carrying on a business of primary production?* (TR 97/11). While this ruling specifically relates to a primary production business, it provides a detailed summary of the relevant factors to consider in determining if a taxpayer is carrying on a business.

More recently, the ATO published Taxation Ruling [TR 2019/1](#) *Income tax: when does a company carry on a business?* specifically for the purposes of determining a company's eligibility for accessing the small business entity tax rate.

Across both rulings, the ATO have provided a listing of the key indicia that have been identified throughout relevant case law that may point to a conclusion that a business is being carried on. TR 97/11 lists these factors as:

- whether the activity has a significant commercial purpose or character
- whether the taxpayer has more than just an intention to engage in business
- whether the taxpayer has a purpose of profit as well as a prospect of profit from the activity
- whether there is repetition and regularity of the activity
- whether the activity is of the same kind and carried on in a similar manner to that of the ordinary trade in that line of business
- whether the activity is planned, organised and carried on in a business-like manner such that it is directed at making a profit
- the size, scale and permanency of the activity
- whether the activity is better described as a hobby, a form of recreation or a sporting activity.

Crypto asset businesses

The ATO takes the approach that the most common use of crypto assets is as an investment (investors acquire and hold crypto assets to make a financial profit from holding or disposing of them)³⁶⁸ and the ATO's web guidance on *Crypto assets used in business* highlights that a business can hold assets without those assets being held in carrying on a business. It further highlights the following indicia for when a crypto asset business may be carried on:

- carrying on the activity for commercial reasons and in a commercially viable way
- intending to make a profit or genuinely believing a profit will be made, even if it is unlikely in the short term
- undertaking activities in a planned, organised and business-like manner, which may include keeping business records, preparing a business plan, and acquiring capital assets or inventory in line with that business plan
- repetition of similar activities for the business on a regular basis.³⁶⁹

368 [‘What are crypto assets?’](#), ATO (Web Page, 30 June 2023).

369 [‘Crypto assets used in business’](#), ATO (Web Page, 29 June 2022).

The guidance also notes that:

... the overall size of your transactions, a high volume of activity, or a level of sophistication doesn't necessarily mean you are carrying on a business using crypto assets.³⁷⁰

The Board notes that taxpayers should be cautious in relying upon indicia set out in ATO guidance on other financial instruments such as shares, noting the differences such as that demonstrated in relation to carrying on a share trading business:

The higher the volume of your share transactions, the more likely it is that you are carrying on a business.³⁷¹

Relevant indicia of a crypto asset business

The Board considers the following key factors to be relevant in assessing whether a crypto asset business is conducted:

- whether the activity has a significant commercial purpose or character
- whether the taxpayer has more than just an intention to engage in business
- whether the taxpayer has a purpose of profit as well as a prospect of profit from the activity
- whether there is repetition and regularity of the activity.

The Board observes that there is a lack of clear guidance in relation to what activities may constitute a business for crypto asset users. Considerations such as business plans, record keeping and level of research may be relatively easy to translate from traditional businesses to crypto asset businesses. However, there is significant ambiguity in determining the appropriate thresholds for regularity, repetition, size and scope. This is due in part to the particular nature of crypto asset activities, and the fact that these activities may involve a significant number of transactions.

While case law and associated ATO guidance provides the relevant considerations, the weighting of these considerations across the nuanced facts of individual taxpayers and activities requires careful consideration. Taxpayers may seek some certainty in their tax positions by applying for a PBR based upon their own circumstances and facts. However, the Board notes that cost of preparing, lodging and ongoing management of a PBR application, in conjunction with the ATO decision-making timeline, can result in this option being difficult and potentially inaccessible to many taxpayers. The impact of this time and cost is particularly relevant in the start-up phase of any undertaking.

The Board has reviewed edited published extracts of PBRs regarding whether a taxpayer is carrying on a crypto asset business. As set out above and in Chapter 6, reliance upon edited PBRs will not provide taxpayers with protection from tax shortfalls or penalties. While the ATO makes it clear that taxpayers are unable to rely on the edited PBRs, these edited PBRs may provide an indication of ATO positioning, particularly in the absence of other ATO pronouncements. Based on the sanitised extracts available, it is often difficult to draw conclusions as to the circumstances in which a crypto asset business is likely to exist.

370 [‘Crypto assets used in business’](#), ATO (Web Page, 29 June 2022).

371 [‘Share investing versus share trading’](#), ATO (Web Page, 30 June 2023).

The following table provides a non-exhaustive summary of the indicia that the Board has considered relevant in assessing whether a crypto asset business is being carried on:

Carrying on a business		
Business-like manner	Repetition and regularity	Size and scale
<ul style="list-style-type: none"> Record keeping. Level of research undertaken. Sophistication of investment strategies. Software and analytics Business plan, budgets and targets. Separate space. 	<ul style="list-style-type: none"> Hours committed. Continued outside employment. Ongoing activities (technical analysis etc). 	<ul style="list-style-type: none"> Number of transactions. Dollar value of transactions.

Business-like manner

In TR 97/11, the ATO sets out that a business is characteristically carried on in a systematic and organised manner rather than on an ad hoc basis. It further states that an activity should generally conform with ordinary commercial principles to amount to the carrying on of a business.³⁷² The ruling notes Fisher J's comments in Ferguson:

... the venture as a whole had a commercial flavour, was conducted systematically and, ... in a business like manner. It could not be said that there was anything haphazard or disorganised in the way in which he carried out the activity.³⁷³

The ATO further notes that the weight of this indicator will depend on the facts of the situation and a taxpayer may still carry on a business despite having poor organisational skills.³⁷⁴

The Board has considered the ATO positioning set out in published edited PBRs and note the existence of the following factors is relevant to this issue:

- Business plans and strategies (for example the existence of a business plan, budgets, targets and other plans, the sophistication of the investment strategy and the level of research and technical analysis).

³⁷² ATO, *Income tax: am I carrying on a business of primary production?* (TR 97/11, 4 June 1997) [68].

³⁷³ *Ferguson v. FC of T* (1979) 37 FLR 310; 79 ATC 4261; (1979) 9 ATR 873.

³⁷⁴ ATO, *Income tax: am I carrying on a business of primary production?* (TR 97/11, 4 June 1997) [70].

- Record keeping and reliance on records (noting that on occasion the ATO draws a distinction between reliance on records solely from the trading account provider and the maintenance of more detailed financial records).
- The existence of a dedicated space for the relevant activities (e.g. whether the taxpayer had a separate space to conduct activities).
- The level of equipment utilised in the activities (although in some PBRs the ATO notes that the ownership of a laptop was not sufficient to meet the threshold of a business).

Size or scale of activity

TR 97/11 sets out that the larger the scale of the activity, the more likely it will be that a business is being carried on but notes that the size or scale is not a determinative test. In the published edited PBRs, the ATO has considered factors including the number of transactions, value of those transactions and the different types of crypto assets and exchanges that have been traded with.

Throughout the consultation process the Board received consistent feedback that the way crypto asset transactions are undertaken may differ from the way transactions are commonly undertaken with other assets. For example, the use of algorithms to undertake a high volume of crypto trades is not uncommon, however the Board notes that the use of these types of tools can also be seen elsewhere such as with certain share markets. The Board has heard that what is largely unique to crypto assets, however, is that due to the way that certain brokerage systems work, a transaction that is representative of a single event may occur through multiple events.

The Board heard one example of a taxpayer having approximately 1,000 identified transactions, which really represented only about 200 substantive transactions. The cause of this was the concurrent transactions that occur when ether is spent. A taxpayer may be seeking to undertake a single transaction, however there could be multiple signing transactions that inflate the activity, such as the gas fee.³⁷⁵

Another example provided in the Board's Working Group related to the operation of brokerage systems and resulted in a taxpayer having 15,000 transactions merely because of the regularity with which the relevant exchange paid returns throughout the day.

This was highlighted in submissions to the Review, including from Koinly who noted:

The unique way people interact and transact with crypto (particularly when resulting in high trading volumes) requires a more detailed consideration of how the tax classification as an investor or trader applies. Further clarification is required concerning the threshold of profit-making intention and transactions with a commercial undertaking despite existing case law which is not crypto-specific (e.g. Myer Emporium and Greig).³⁷⁶

375 'GAS AND FEES', *Ethereum* (Web Page, 16 August 2023) explains that 'Since each Ethereum transaction requires computational resources to execute, each transaction requires a fee. Gas refers to the fee required to execute a transaction on Ethereum, regardless of transaction success or failure.'

376 Submission A10, 10.

It is apparent that the number of transactions that are being undertaken by a crypto asset user may not provide meaningful insight into the size and scale of their activities. While the number of trades that are undertaken may be useful in identifying a pattern of regularity, the Board does not consider that it should be the determinative factor in the existence of a business.

Repetition and Regularity

In addressing the activities that are being repeated regularly by a crypto asset user, consideration must be given to the whole of the activities being undertaken, throughout the entire process of research, planning and execution. As set out in TR 97/11:

For example, in *Hope*³⁷⁷ the ‘transactions were entered into on a continuous and repetitive basis’, such that the taxpayer’s activities ‘manifested the essential characteristics required of a business’. Similarly, in *JR Walker*³⁷⁸ the court held that there was repetition and regularity in the taxpayer’s activities directed to the breeding of high quality Angora goats and to keeping up with the latest information on Angora goats.

In the published edited PBRs, the Commissioner has looked to various factors relevant to this indicator including the number of hours spent on the activities over relevant periods, the frequency of trades occurring and what other activities the taxpayer was undertaking (such as being in full time employment elsewhere). Some of the PBRs where the ATO took the view that a cryptocurrency business was carried on appear to illustrate very active trading (e.g. PBR 5010050065720³⁷⁹ details over 12,000 transactions, daily to weekly trading and up to 30 hours per week being dedicated to crypto and share trading activities). In other PBRs, the ATO has referred to the limited nature of the activities in concluding that no business was being carried on. The fact that the taxpayer continued employment elsewhere, did not necessarily prevent the Commissioner from concluding that a business was being carried on.

Board’s conclusion

Whilst tax law principles in relation to investment as opposed to carrying on a business including a business of trading can be applied to taxpayers who enter into crypto transactions, there are special features of crypto transactions that require particular expertise and understanding to determine the correct conclusion in relation to this threshold tax issue. At the present time there is a lack of judicial precedent to support taxpayers in determining the correct tax treatment. Accordingly, a high level of guidance is necessary so that taxpayers (and their advisers) can access the assistance they require to correctly determine their tax liabilities. Whilst the ATO has endeavoured to provide, and has provided, significant guidance on its website (see Chapter 6), there is a current and will be a continuing need for increased detailed ATO guidance, particularly incorporating examples of activities in the crypto ecosystem that may amount to carrying on a business.

377 *Hope v. The Council of the City of Bathurst* (1980) 144 CLR 1; 80 ATC 4386; (1980) 12 ATR 231.

378 *FC of T v. JR Walker* 85 ATC 4179; (1985) 16 ATR 331.

379 ATO, *Income tax – assessable income – business and professional income – carrying on a business* (PBR Authorisation Number: 5010050065720, 31 May 2018).

Recommendation 7.1

Established common law principles can apply to crypto assets to determine whether profits or gains are on revenue or capital account. However, there is currently a lack of judicial precedent specifically dealing with crypto transactions. This includes, significantly, the circumstances in which crypto activities will amount to carrying on a business, including a business of trading. Taxpayers therefore need access to information and guidance upon which they can rely to ensure their tax disclosures will be acceptable to the ATO.

Accordingly, the Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop further and detailed guidance with examples/case studies in relation to how the ATO will apply the established indicia for carrying on a business to crypto asset activities.

Commercial profit-making transactions

Background

As outlined above, it is not necessary that a taxpayer be carrying on a business for an activity to be treated on revenue account. The principles established by Myer Emporium and subsequent decisions indicate that a profit derived from an isolated transaction may constitute income where the transaction is undertaken with a profit-making intention in carrying out a business operation or commercial transaction. Where such a transaction results in a loss, the resulting loss will be deductible to the taxpayer.³⁸⁰

As highlighted by the Members of the Tax Profession:

In recent times, the ATO has emphasised a purported dichotomous characterisation of crypto activities by taxpayers as falling within either the CGT regime or being characterised as part of carrying on of a business.

As has been raised by our peers in the profession previously, we raise our concern over this view. As highlighted by the profession, crypto activity gains or losses can be on revenue account but not forming part of a business operation and may be best to be seen as an isolated profit-making transaction.³⁸¹

In this section, the Board will provide an overview of the relevant principles for determining if a transaction has been entered into with a profit-making purpose, how those principles may apply to crypto assets and

380 ATO, *Income tax: whether losses on isolated transactions are deductible* (TR 92/4, 30 July 1992) [4] sets out the circumstances under which a loss from an isolated transaction will be deductible under ITAA 1997 s 8-1.

381 Submission A08, 9.

associated transactions, and the relevant indicia that a commercial transaction in relation to crypto assets has been undertaken.

Guiding principles

The principles for establishing the existence of a profit-making intention are well established in Myer Emporium with an extensive history of case law relying upon this decision.

Myer Emporium dealt with a financial restructure, which included the taxpayer advancing an \$80 million loan for a period exceeding seven years with interest payable at 12.5% per annum. Three days later, all of Myer Emporium's right, title and interest in and to the interest payable by the borrower of the balance of a loan was assigned to Citicorp, in exchange for consideration of \$45.37 million.

The Commissioner argued that the \$45.37 million consideration constituted assessable income under the former section 25(1)³⁸² and second limb of the former section 26(a)³⁸³ of the ITAA 1936. The taxpayer argued that the realisation of a capital asset is capital, and that a gain made as the result of a business deal or venture in the nature of trade is not income unless it is made in the ordinary course of carrying of business.

The Full Court of the High Court concluded that the \$45.37 million was assessable income. This Court determined that a receipt may constitute income if it arises from an isolated business operation or commercial transaction entered into otherwise than in the course of carrying on the taxpayer's business, so long as the taxpayer entered into the transaction with the purpose of making a relevant profit or gain from the transaction.

As set out above, in TR 92/3, the Commissioner states that in accordance with Myer Emporium, profit from an isolated transaction is generally income when both of the following elements are present:

- the intention or purpose of the taxpayer in entering into the transaction was to make a profit or gain
- the transaction was entered into, and the profit was made, in the course of carrying on a business or in carrying out a business operation or commercial transaction.

The ruling sets out the following considerations for determining whether an isolated transaction amounts to a business operation or commercial transaction:

- the nature of the entity undertaking the operation or transaction
- the nature and scale of other activities undertaken by the taxpayer
- the amount of money involved in the operation or transaction and the magnitude of the profit sought or obtained
- the nature, scale and complexity of the operation or transaction
- the manner in which the operation or transaction was entered into or carried out

382 Former ITAA 1936 sub-s 25(1) of the ITAA 1936 was replaced with ITAA 1997 sub-ss 6-5(1), (2) and (3).

383 ITAA 1936 former sub-s 26(a) was replaced with ITAA 1936 s 25A dealing with profit making undertakings and schemes for property acquired prior to 1985.

- the nature of any connection between the relevant taxpayer and any other party to the operation or transaction
- if the transaction involves the acquisition and disposal of property, the nature of that property
- the timing of the transaction or the various steps in the transaction.

More recently, in *Greig v Commissioner of Taxation* [2020] FCAFC 25, 275 FCR 445 (Greig), the Full Federal Court applied the principles from *Myer Emporium* in determining whether losses arising on share trading transactions were deductible.

In Greig, the taxpayer had a knowledge of a particular ASX listed company and considered that there was value in the shares beyond that reflected in their share price. Mr Greig considered there was a reasonable prospect of making a profit in the short-term and undertook 64 transactions across 2 years to acquire shares in the company, with the intention of making a profit from their sale within 4 to 5 years.

During the period of acquisition and ownership, Mr Greig's activities included (among other things) monitoring the share price and ASX announcements, conducting research through financial press, investment bank and stockbroker reports and attending company meetings and presentations. Mr Greig influenced a majority of the company's shareholders to reject a takeover proposal. The company was ultimately placed into voluntary administration and a deed of company arrangement was approved in December 2014, which resulted in the taxpayer realising share losses of approximately \$11.85 million plus legal costs.

The Commissioner argued that the relevant transactions were not incurred in a business operation or commercial transaction of a kind contemplated by the Myer Emporium principle and that the profit-making purpose was absent.

The Full Court (Kenny and Steward JJ, Derrington J dissenting) concluded that the taxpayer had acquired the shares in a business operation or commercial transaction, applying the *Myer Emporium* principle.

In a Decision Impact Statement following Greig, the Commissioner stated that:

The Commissioner's view is that the Full Court's finely balanced conclusion was open on the particular facts of this case and does not disturb the Commissioner's understanding of the Myer Emporium principle.³⁸⁴

ATO position

In the non-binding explanatory section of TD 2014/26, the ATO confirms its view that it is possible for crypto asset transactions to occur with a profit-making intention and be taxable on revenue account. The guidance notes that the relevant factors in determining if a transaction is commercial are those set out in TR 92/3. It states:

Applying these factors to a Bitcoin scenario, of particular relevance, is the amount of money involved in the mining (or acquisition) and disposal of the bitcoin, the magnitude of the profit

384 ATO, [Decision impact statement Greig v Commissioner of Taxation](#) (9 June 2022).

sought or obtained, the length of time the bitcoin is held before disposal and whether that bitcoin has no other immediate use other than as an object of trade.³⁸⁵

Some submissions to the review noted that the circumstances in which crypto asset transactions may be treated as being on revenue account in accordance with Myer Emporium does not appear to be overtly expressed elsewhere through the ATO's web guidance.³⁸⁶

The ATO web guidance provides express statements in relation to the application of the capital gains tax provisions and further information in relation to carrying on a business, however there is no specific guidance on isolated profit-making transactions for crypto assets.

Observation 7.1

There is a risk that a user of the ATO website may conclude that the appropriate tax treatment for crypto asset transactions is either:

- under the capital gains tax provisions
- as trading stock in carrying on a business.

With the exception of the minor reference in TD 2014/26, the ATO does not provide guidance in relation to the taxation implications of crypto asset transactions occurring as part of an isolated profit-making undertaking or where the profit/loss on disposals of crypto assets may be on revenue account to a business even if those assets are not held as trading stock.

Indicia for a commercial transaction

The Board has considered the indicia set out in TD 2014/26 and provides the following observations in relation to:

- the amount of money involved in the mining (or acquisition) and disposal and the magnitude of the profit sought or obtained
- the length of time the asset is held before disposal
- whether that asset has no other immediate use other than as an object of trade.

The Board notes that particular issues and challenges arise in applying the above criteria to crypto assets, including:

- Due to the significant fluctuations in crypto asset values, there may be limited meaningfulness in a determination of a magnitude of profit being sought. In the context of crypto assets being subject to significant fluctuations in value, the Board questions whether this an appropriate criterion.

385 TD 2014/26 (n 246) [23].

386 Including Minter Ellison in Submission A18, [3.6]; KPMG in Submission A30, 9.

- The Board agrees that in general, the longer an asset is held, the more likely that there is a passivity to the investment and less likely that the asset is held with commercial or profit-making intent. However, there are limits on the extent to which the length of time will be relevant to this issue. As Justice Steward found in Greig:

The fact that the taxpayer intended to hold his Nexus shares until he could secure his profit, whether in the 'long term or any term', does not detract from the conclusion I have reached. The taxpayer's purpose was not to hold the shares as a long-term investment and to receive dividends over time. His plan was to sell the shares at a profit at least, I infer, up to the time of his retirement. If the profit had emerged quickly, I find that that is when he would have sold the Nexus shares. In that respect, I observe that some profit-making schemes can take many years to complete. In Whitfords Beach, the profit-making plan commenced in late 1967 and assessable profits were made from 1971 over a period of years. It is not antithetical to a profit-making undertaking for a taxpayer to wait for the profit to become realisable, so long as that was the profit the taxpayer planned to secure. Waiting, without more, will not convert the profit eventually realised into an affair of capital.³⁸⁷

The Board considers that where a taxpayer is holding a crypto asset as part of a profit-making or commercial undertaking, and there is an extended period between the time of acquisition of that asset and the time of disposition, that holding may still be consistent with a profit-making purpose. The time period over which the crypto asset has been held should only be relevant to the extent that it is demonstrative of the taxpayer's profit-making purpose and achievement of that goal.

It is unclear from available guidance what period of time the ATO may consider to be relevant in respect of this factor and what level of evidence may be required by a taxpayer to demonstrate that the time period remains consistent with any underlying commercial or profit-making intention.

- The most significant indicia of a commercial transaction that has been highlighted by stakeholders to the Review is the nature of certain crypto assets. It has been argued that cryptocurrency, such as bitcoin, may have no purpose other than exchange or trade and such an asset may therefore be always regarded as being acquired with a profit-making intention.³⁸⁸

This view was expressed extensively throughout the consultation process, including by Minter Ellison, who highlighted issues with the Commissioner's position, noting that it would be difficult to comprehend a situation where a taxpayer would not acquire cryptocurrency to make a profit on realisation.³⁸⁹

The Financial Services Council submission to the Review referenced TR 92/3 which includes an example stating that '*if the property has no use other than as the subject of trade, the conclusion that the property was acquired for the purpose of trade and, therefore, that the transaction was commercial in nature, would be readily drawn*'.³⁹⁰

387 *Greig v Commissioner of Taxation* [2020] FCAFC 25 at [246] per Steward J.

388 In Submission A18, 5, Australian Bitcoin Industry Body highlighted that Bitcoin's entire purpose is to be used to purchase items for personal use or consumption. Bitcoin provides no other utility other than to buy goods or services in the future. Bitcoin cannot be eaten, worn or even seen. This is a deliberate part of its design, and differs from gold which has non-monetary uses such as jewellery.

389 Submission A18 [3.11].

390 Submission A32, 4.

In relation to this point, TD 2014/26³⁹¹ references *Edwards (Inspector of Taxes) v. Bairstow and Anor* [1956] A.C. 14 noting that this case considered whether the acquisition and disposal of a spinning plant amounted to an adventure in the nature of trade. Viscount Simonds found:

that the nature of the asset lent itself to commercial transactions. And by that I mean, what I think Rowlatt J. meant in *Leeming v. Jones* [1930] 1 KB 279 that a complete spinning plant is an asset which, unlike stocks or shares, by itself produces no income and, unlike a picture, does not serve to adorn the drawing room of its owner. It is a commercial asset and nothing else.

The Board considers that a strong argument can be made that a similar conclusion can be drawn in relation to certain crypto assets, such as bitcoin, where there is no expectation of any other use for the asset. Where a transaction is undertaken in relation to such an asset and the taxpayer does so with a profit-making intention, a conclusion could readily be drawn that such a transaction is commercial in nature.

It is noted however, that crypto assets comprise a very diverse group of assets which may be utilised for a variety of purposes. NFTs, for example, may provide a tokenisation of a real world asset and serve any number of purposes from demonstrating ownership of an art piece or property, to entry to a concert or event, or even representation of an individual's identity. Other cryptocurrencies, such as ether (or wrapped ether), may be considered to have a broader purpose involving DeFi, such as borrowing, lending and earning interest on the Ethereum blockchain.³⁹² Furthermore, even holdings of Bitcoin may have a broader purpose, for example to serve as collateral for a Wrapped Bitcoin token on the Ethereum blockchain so that it can be used in DeFi activities. The Board also notes that the dynamic nature of crypto assets means that the functions of a particular crypto asset may evolve over time.

Given the issues, the Board considers that further guidance is necessary regarding the application of the Myer Emporium principle to crypto asset transactions. In short and as explained previously, profits and gains may be on revenue account even where the trading stock provisions do not apply. The Board considers that there appears to be a wider range of transactions that may be undertaken with a profit-making intention in carrying out a business operation or commercial transaction and therefore be taxed on revenue, rather than capital account. The Board also considers that the use to which the particular currency is intended to be put, and indeed is put, will also affect the characterisation of any profit on disposal, as either revenue or capital.

The Board notes that without ATO guidance on the Myer Emporium principle, given the particular issues that taxpayers and their advisers need to consider, there is a real risk that taxpayers with the same fact patterns could reach different conclusions resulting in different tax outcomes (known as horizontal inequity between taxpayers).

International considerations

The Board has explored the international experience in relation to the characterisation of crypto assets through engagement with regulatory bodies in other jurisdictions. These comparisons may be of limited value without a detailed assessment of the relevant tax rules in each jurisdiction, noting that rules may well vary materially between different jurisdictions (as an example, the *Myer Emporium* principle relevant to isolated transactions in Australia may not be applicable in all jurisdictions).

391 TR 2014/27 (n 329) fn 21.

392 [‘What’s unique about ETH?’](#), *Ethereum* (Web Page, 26 October 2023).

The Board was interested in the NZ experience, noting the absence of a CGT regime. NZ IR set out in their public website guidance that:

If you acquire cryptoassets for the purpose of disposing of them you need to pay income tax on any profit you make. For example if you buy or mine cryptoassets to sell or exchange them. If you make a loss when you sell your cryptoassets you may be able to claim this loss.

The guidance goes on to state:

If you plan on selling or exchanging your cryptoassets at some point in the future, then you have a purpose of disposal. It does not matter how long you plan to hold onto your crypto assets for before selling or exchanging them. Your main purpose can still be to sell or exchange them, even if it takes a few years.

The Board notes that the 'personal property acquired for the purpose of disposal' provision is applied in relation to crypto assets by NZ IR:

An amount that a person derives from disposing of personal property is income of the person if they acquired the property for the purpose of disposing of it.³⁹³

In relation to determining purpose, NZ IR advise:

What you say your purpose for getting cryptoassets is must be supported by what you actually do and the surrounding circumstances, including the:

- nature of the asset (for example, does it provide an income stream or any other benefits while being held)
- circumstances of the purchase
- number of similar transactions
- length of time you hold the asset
- circumstances of the use and disposal of the asset.

Just saying why you got your cryptoassets is not enough. For example, you might say you got your cryptoassets as:

- a long-term investment
- a hedge against inflation
- portfolio diversification
- a store of value outside the monetary system.

These types of reasons usually still involve a purpose of eventually selling or exchanging your cryptoassets. There will be a purpose of disposal if sale or exchange is the way to achieve your goals.³⁹⁴

393 *Income Tax Act 2007 (NZ) s CB 4.*

394 ['Acquiring cryptoassets to sell or exchange'](#), *Inland Revenue* (Web Page, 30 August 2022).

The Board observes that the NZ IR web guidance indicates that most crypto asset transactions will be on revenue account. This appears to be in contrast to the ATO position, although the Board notes that the absence of a capital gains tax regime in NZ may well be relevant in practice to this position (i.e. if the NZ IR took the view that the transactions were taxable on capital account, presumably those transactions may then escape taxation).

The UK position is closer to Australia, with the UK HMRC considering that most crypto asset transactions will be subject to CGT:

In the vast majority of cases, individuals hold cryptoassets as a personal investment, usually for capital appreciation or to make particular purchases. They will be liable to pay Capital Gains Tax when they dispose of their cryptoassets.

The guidance further notes:

... there may be cases where the individual is running a business which is carrying on a financial trade in cryptoassets and they will therefore have taxable trading profits. This is likely to be unusual, but in such cases Income Tax rules would take priority over the Capital Gains Tax rules.³⁹⁵

The guidance provided by the Canada Revenue Agency (CRA) demonstrates less of a default positioning in relation to the appropriate classification noting:

The income you get from disposing of cryptocurrency may be considered business income or a capital gain. To report it correctly, you must first establish what kind of income it is.

It further notes:

... you are generally considered to be carrying on a business if your course of conduct indicates that you are disposing of crypto-assets in a way capable of producing gains, with that object in view, and the transactions are carried out in a manner similar to a trader or dealer in securities. The following factors may indicate that you are carrying on a business:

- Frequency of transactions – you have a history of extensive buying and selling of crypto-assets
- Period of ownership – you hold your crypto-assets for a short period of time, and you turn them over quickly
- Knowledge of crypto-asset markets – you have knowledge of, or experience in, crypto-asset markets
- Time spent – you spend a substantial part of your time studying crypto-asset markets
- Financing – you finance your crypto-asset purchases by some form of debt
- Advertising – you advertise that you are willing to buy crypto-assets.³⁹⁶

395 [‘CRYPTO20050 – Cryptoassets for individuals: which taxes apply’](#), *HM Revenue & Customs* (Web Page, 21 August 2023).

396 [‘Information for crypto-asset users and tax professionals’](#), *Canada Revenue Agency* (Web Page, 13 December 2023).

For the US, in response to the question of what type of gain or loss a taxpayer realises on the sale or exchange of virtual currency, the US IRS responded:

The character of the gain or loss generally depends on whether the virtual currency is a capital asset in the hands of the taxpayer. A taxpayer generally realizes capital gain or loss on the sale or exchange of virtual currency that is a capital asset in the hands of the taxpayer. For example, stocks, bonds, and other investment property are generally capital assets. A taxpayer generally realizes ordinary gain or loss on the sale or exchange of virtual currency that is not a capital asset in the hands of the taxpayer. Inventory and other property held mainly for sale to customers in a trade or business are examples of property that is not a capital asset.³⁹⁷

It was apparent from the Board's consultations that the issue of identifying whether gains and losses on crypto assets are treated on capital or revenue account is a difficult issue faced by many jurisdictions and that a bias towards a particular positioning is apparent in some guidance (although varied between different jurisdictions).

Board's conclusion

As has been stated in relation to the indicia for carrying on a business, the Board observes that there is a lack of guidance and precedents to support taxpayers in determining whether a crypto asset transaction can be considered to be a commercial profit-making transaction such that any profits or gains (or losses) on disposal will be on revenue account, along with examples of the types of activities that may amount to commercial profit-making undertakings.

Recommendation 7.2

The Board has observed (Observation 7.1) that with the exception of the minor reference in TD 2014/26, the ATO does not provide guidance in relation to the taxation implications of crypto asset transactions occurring as part of an isolated profit-making undertaking or whether the profit/loss on disposals of crypto assets may be on revenue account even if those assets are not held as trading stock.

In relation to these issues, taxpayers require access to information and guidance upon which they can rely to ensure their tax disclosures will be acceptable to the ATO.

Accordingly, the Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop guidance in relation to the application to crypto asset transactions of the principles established regarding isolated transactions entered into with a commercial or profit-making intention and where the profit/loss on disposal of crypto assets may be on revenue account to a business even if those assets are not held as trading stock.

397 Internal Revenue Service (IRS), *IRS Virtual Currency Guidance* ([Notice 2014-21](#), 14 April 2021).

Capital Gains Tax

Background

Crypto assets present challenges for the CGT provisions as a result of the novel and complex transactions and events that occur within the ecosystem. The Board has considered the various factors relevant to the application of the CGT regime, including:

- whether a CGT asset is involved
- if a CGT event has occurred
- the timing of a CGT event
- the identity of the parties to the CGT event
- the cost base or reduced cost base and capital proceeds in respect of the CGT event
- how any modifications or exemptions apply.

Are crypto assets CGT assets?

The tax legislation defines a CGT asset as:

- a) any kind of property; or
- b) a legal or equitable right that is not property.

An interest in one of the above assets is also expressly included as a CGT asset.³⁹⁸

The Commissioner has provided binding guidance in TD 2014/26 confirming the Commissioner's position that bitcoin is a CGT asset. While reliance on this guidance provides taxpayer protection in that it is binding on the Commissioner (refer Chapter 6), it does not bind the taxpayer and may be subject to challenge. Additionally, this guidance deals specifically with bitcoin, and in other guidance, the ATO has noted that the ruling, by extension, applies to crypto assets with the same features as bitcoin.

As discussed in Chapter 4 of this Report, there is some contention about whether crypto assets are property, although there is increasing judicial commonality in the view that crypto assets are property. Accordingly, and as stated in Chapter 4, the Board's considerations, observations and recommendations are based on the assumption that crypto assets (and in particularly cryptocurrencies) are property.

Application of CGT to crypto assets

A capital gain or a capital loss only arises where a CGT event occurs. The CGT events are set out in Division 104 of the ITAA 1997.

398 ITAA 1997 s 108-5.

While each CGT event sets out the relevant considerations in determining the timing and calculation of any capital gain or loss, the underlying considerations for most CGT events are as follows:

- time of the event
- capital proceeds
- cost base or reduced cost base.

The CGT measures include ‘anti-overlap’ provisions that, in summary, mean that where an amount is taxed under another provision (for example as ordinary income), the same amount is then not also subject to CGT. Rather than addressing the individual considerations for each CGT event, the Board has provided its observations on specific issues that may apply in determining these elements for crypto assets.

Timing

The provisions relating to each CGT event set out the time that the relevant event is taken to have occurred. This is relevant for not only determining in which income year a capital gain or capital loss arises but is also relevant for other issues in applying the CGT rules (including, for example, the eligibility for the CGT discount which broadly requires that an asset is held for at least 12 months).

Under CGT event A1, which relates to the disposal of a CGT asset, the time of the CGT event is when the contract for the disposal is entered into or, if there is no such contract, when the change of ownership occurs.³⁹⁹ The Board notes that in crypto asset transactions, this may not always be a simple proposition, and may be particularly important given the volatility in the prices of crypto assets.

For example, the complexity that presents with timing particularly manifests with certain crypto asset transactions such as airdrops or certain staking arrangements, where it may not always be possible to identify the exact time that there has been a clear change in beneficial ownership. The Board has provided further observations in relation to timing issues in its analysis of proof of stake transactions in Chapter 9.

Further timing issues may arise in situations such as where a crypto asset is effectively disposed of as a result of a lost private key, theft or the collapse of a crypto asset platform with custody of tokens.

Capital proceeds and cost base

In general terms, the calculation of a capital gain is determined by subtracting the cost base of the CGT asset from the capital proceeds that arise from the CGT event. A capital loss involves a similar calculation but utilises the reduced cost base rather than the cost base.⁴⁰⁰ For ease of reference, the comments below are concerned only with the calculation of a capital gain.

399 ITAA 1997 sub-s 104-10(3).

400 ITAA 1997 s 110-55 sets out that the elements of the reduced cost base of a CGT asset is the same as the elements of cost base, except for the third element.

A summary of the key elements of the cost base and the capital proceeds is summarised below:

Cost base	Capital proceeds
Money you paid or are required to pay in respect of acquiring the asset.	Money you have received, or are entitled to receive, in respect of the event happening.
Market value of any other property you gave or are required to give, in respect of acquiring it (worked out at the time of acquisition).	Market value of any other property you have received, or are entitled to receive, in respect of the event happening (worked out as at the time of the event).

Both capital proceeds⁴⁰¹ and cost base⁴⁰² are subject to various modification in certain circumstances and depending on the CGT event that is applicable. For example, there is a market value substitution rule that applies in certain situations.

Valuing capital proceeds and cost base

In the straightforward scenario of a crypto asset being exchanged for fiat currency or vice-versa, the first limb of the capital proceeds or cost base definition will treat that fiat currency (money) as capital proceeds or cost base and the calculation will be straightforward. Transactions where crypto assets are exchanged for fiat currency, however, only represent a portion of the transactions that occur with crypto assets. It is not uncommon, for example, for one crypto asset to be exchanged for another, without a conversion to fiat currency.

Where capital proceeds or cost base are represented by something other than money (such as another crypto asset) the second limb of the capital proceeds and cost base definitions will apply and it is necessary to determine the market value of the relevant property that has been received or given. The Board notes that this limb will only apply to the extent that what is received or given (i.e. the crypto asset) is property (noting that the Board is proceeding on the basis that crypto assets are property, for the reasons stated in Chapter 4). For further information see 'Valuation' below.

Observation 7.2

Clarity in relation to the valuation of crypto assets given in respect of acquiring a capital asset (including another crypto asset) or received in respect of the disposal of a capital asset (including another crypto asset) is necessary to establish cost base and capital proceeds.

401 ITAA 1997 s 116-10, capital proceeds may be modified under rules for market value substitution; apportionment; non-receipt; repaid; and misappropriation.

402 ITAA 1997 sub-div 112-A, cost base must be modified under market value substitution; split, changed or merged assets; apportionment; assumption of liability rule; acquisitions of assets involving look-through earnout rights; and put options.

Capital proceeds and cost base where there are multiple transactions in fungible assets

In determining the CGT consequences of any transaction in crypto assets, it is necessary to consider the individual asset that is being dealt with and to allocate a cost base and capital proceeds for the CGT event in relation to that asset.

As has been highlighted throughout the Report, crypto asset users often undertake a high volume of transactions and crypto asset prices are subject to high volatility and fluctuations. Identification of the specific crypto asset cost base when a transaction occurs is another area of complexity faced by crypto asset users.

In respect of other CGT assets, the ATO has published binding guidance regarding the identification of individual assets that form part of a holding of multiple CGT assets. For example, the ATO has issued binding guidance for shareholders in relation to how to identify which share a taxpayer has disposed of in CGT Determination [TD 33 Capital Gains: How do you identify individual shares within a holding of identical shares?](#) (TD 33). This determination sets out that:

- Where shares are able to be individually distinguished, those shares are identifiable and their date of acquisition and cost base will be a matter of fact.⁴⁰³
- Where shares form part of a holding of identical shares, the taxpayer needs to identify which shares are being disposed of.⁴⁰⁴
- For unidentifiable shares, the Commissioner accepts a first-in first-out (FIFO) basis of identification and will also accept the taxpayer's selection of the identity of the shares disposed of.⁴⁰⁵
- Average cost is not acceptable for shares unless all the following requirements are satisfied:
 - they are in the same company
 - they are acquired on the same day
 - they confer identical rights and impose identical obligations.⁴⁰⁶

Similar guidance is provided in the ATO's Tax Time guidance product *Capital gains tax on sale of shares or units*,⁴⁰⁷ however this document sets out that it is necessary to identify which shares are being disposed of and provides three common methods that taxpayers may choose from for determining the allocation for shares that form part of a parcel of shares are:

- FIFO – shares bought first are sold first.
- Last-in, first-out (LIFO) – shares bought last are sold first.
- Highest-in, first-out (HIFO) – most expensive shares bought are sold first.

403 ATO, *Capital Gains: How do you identify individual shares within a holding of identical shares?* (TD 33, 19 December 1991) [1] ('TD 33').

404 TD 33 (n 403) [3].

405 TD 33 (n 403) [4].

406 TD 33 (n 403) [5].

407 '[Tax time toolkit for investors](#)', ATO (Web Page, 2 June 2023).

The choices that are made where a parcel of shares is involved in a CGT event will not only affect the resulting capital gain or capital loss, but also determine the time at which the asset was acquired. This timing is particularly relevant in determining any potential eligibility for the CGT discount. The choice of methodology for each asset needs to be made in the income tax return for the relevant year.

The Board notes that a FIFO method will maximise the potential likelihood of availability of the general discount on a specific transaction as those assets will have been held for the longest time. However it is possible that LIFO or HIFO may defer the assessability of gains.

The issue is whether a ‘short cut’ allocation methodology like those that may be applicable to shares and units should also be available in respect of crypto assets to assist taxpayers in determining the CGT consequences of holding and disposing of crypto assets, providing clearer timing rules and reducing compliance costs. If so, the issue then is what methodologies might be appropriate and workable in the context of crypto asset transactions.

In EY’s submission to the Review they commented on the complexity of the FIFO/LIFO methodologies, noting:

Urgent, clear and practical guidance is required on appropriate valuation methodologies to calculate gains or losses on actual disposals of cryptocurrency or digital assets. There have been a number of questions asked on the ATO Community in respect to whether a FIFO, LIFO or average weighted cost method is appropriate when determining the amount of a gain or loss on disposal, however, there is no binding guidance on this issue. It should be noted that using a FIFO or LIFO method of valuation may not be practical, or even possible, where a taxpayer has thousands (or tens/hundreds of thousands) of cryptocurrency and digital asset transactions in an income year.⁴⁰⁸

In the Board’s consultation with international jurisdictions, CRA representatives noted that Canadian taxpayers who own identical items of property (such as classes of crypto assets) are required to apply an average cost methodology when determining the applicable cost in a transaction.⁴⁰⁹

Similar to Australia, Canadian tax law provides for only 50% of a capital gain to be included as taxable income by a taxpayer. However, unlike Australia, this 50% reduction is not contingent upon the asset being held for a certain period of time. Accordingly, the time that a particular asset was acquired is not relevant in calculating a discounted capital gain.

While an average cost methodology would simplify the record keeping obligations for Australian taxpayers, a broad scale average cost methodology may present challenges in attributing an acquisition time to a particular CGT asset. This would mean that determination of eligibility for the CGT discount may be difficult in many situations.

As noted above, the Commissioner will currently accept averaging of cost where identical shares are acquired on the same day.⁴¹⁰

408 Submission A20, 17.

409 *Income Tax Act R.S.C., 1985, c. 1 (5th Supp.)* s 47.

410 TD 33 (n 403) [5].

The Board considers that crypto asset users would be assisted by access to opportunities for practical solutions in establishing the cost of crypto assets that have been disposed of. The Board considers that the ATO should work with the Crypto Industry Working Group (refer Chapter 6) to establish and publish a position (binding, if practicable) in relation to the use of practical costing methodologies for crypto assets.

Recommendation 7.3

Establishing the cost of cryptocurrencies for CGT purposes can be difficult in practice, when large quantities of effectively fungible assets are acquired and sold in different parcels. Different potential methodologies include First in First Out (FIFO), Last in First Out (LIFO), Highest in First Out (HIFO) and averaging.

The Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, establish and publish a position (binding, if practicable) in relation to practical costing solutions for crypto assets that would be acceptable to the ATO.

Application of CGT personal use exemption to crypto assets

The CGT exemption for personal use assets has been a feature of the CGT regime since its introduction and is broadly designed to:

- avoid the difficulties that would be involved for taxpayers and the ATO in recording and assessing a multitude of small value transactions
- deny a deduction for losses on most types of personal-use property that might otherwise lead, in effect, to a tax subsidy for certain personal-use expenditures.⁴¹¹

In summary, a gain from a personal use asset is disregarded where the first element of the asset's cost base is less than \$10,000⁴¹² and any loss from a personal use asset is disregarded⁴¹³. A personal use asset is a CGT asset (except a collectable) that is used or kept mainly for your (or your associate's) personal use or enjoyment and associated rights and debts.⁴¹⁴

ATO position – cryptocurrency assets

The ATO provides web guidance in relation to crypto assets as personal use assets, stating:

411 Explanatory Memorandum, Income Tax Assessment Amendment (Capital Gains) Bill 1986 and Income Tax (Rates) Amendment (Capital Gains) Bill 1986 (Cth) 21.

412 ITAA 1997 sub-s 118-10(3).

413 ITAA 1997 s 108-20.

414 ITAA 1997 sub-s 108-20(2)

... a crypto asset (such as Bitcoin, a cryptocurrency) is a personal use asset if you keep or use it mainly for personal use, for example, to buy items for personal use or consumption.⁴¹⁵

The guidance sets out that the relevant time for determining if a crypto asset is a personal use asset is when it is disposed of and notes:

- A crypto asset you acquire and use in a short period of time to buy items for personal use or consumption is **more likely** to be a personal use asset.
- A crypto asset you acquire and hold for some time before you use it, or only use a small proportion of it, to buy items for personal use or consumption is **less likely** to be a personal use asset.

The guidance also sets out that a crypto asset will not be a personal use asset if it is kept or used:

- as an investment
- in a profit-making scheme
- in carrying on a business.

Further, it notes that except in rare situations, a crypto asset will also not be a personal use asset if:

- it has to be exchanged for Australian dollars or a different crypto asset to buy items for personal use and consumption
- it is used to acquire a gift card or similar product that is then used to acquire items for personal use or consumption
- it is used to top up a prepaid debit card with crypto assets, which is converted to Australian dollars and later used to acquire items for personal use or consumption
- a payment gateway or bill payment intermediary has to be used to acquire the items on behalf of the holder, rather than acquiring them directly with the crypto asset.

The ATO has also published several edited PBRs in relation to questions of personal use asset status of crypto assets. The limitations in relying on the published extracts of PBRs is set out in Chapter 6 of the Report. Noting those limitations, the Board has reviewed 14 published edited PBRs⁴¹⁶ that consider the application of the personal use exemption. Of these 14 rulings, there were 5 instances where any of the crypto asset transactions were considered to result in the application of the personal use exemption.

In two of these positive decisions (PBRs 1051895820704⁴¹⁷ and 1051934343575⁴¹⁸), the crypto represented gaming components and the Commissioner was satisfied that the components were held mainly for the user's personal use and enjoyment. In PBR 1051537413985, the Commissioner accepted that crypto assets

415 [‘Crypto asset as a personal use asset’](#), ATO (Web Page, 9 November 2023).

416 ATO PBR Rulings, Authorisation Numbers: 7915126463611 (16 January 2019); 1051497886035 (9 April 2019); 1051490734976 (30 May 2019); 5010060075585 (28 June 2019); 1051532101397 (5 July 2019); 1051532082955 (5 July 2019); 1051537413985 (9 July 2019); 1051581160813 (20 September 2019); 1051581846123 (20 September 2019); 1051694175099 (1 October 2020); 1051895820704 (23 September 2021); 1051976096088 (25 May 2022); 1051781223882 (24 November 2020); 1051934343575 (27 September 2022).

417 ATO, *CGT – personal use assets* (PBR Authorisation Number: 1051895820704, 23 September 2021).

418 ATO, *Income and capital* (PBR Authorisation Number: 1051934343575, 27 September 2022).

were personal use assets to the extent that they were held to directly pay for an annual online personal subscription service, although the remainder of that same crypto asset that was disposed of for fiat, was not a personal use asset and considered to be held for the rise in value.⁴¹⁹

In PBR 1051781223882, the Commissioner confirmed that cryptocurrency that was acquired for the purposes of online gambling was a personal use asset as was cryptocurrency acquired as a result of winnings where it was immediately transferred back to the gambling platform. However, any winnings that were converted to cash were not treated as personal use assets.⁴²⁰

Many of the conclusions reached in the PBR analysis reference *Favaro v FC of T (1996)* 34 ATR 1; 96 ATC 4975 in which the Federal Court considered whether Italian currency which was held to be converted to Australian currency was a personal use asset. The evidence of Mr Favaro was that he kept the Italian currency for the purpose of its being exchanged for Australian currency at a favourable rate. The Court concluded that the Italian currency was not used or kept primarily for personal use, and that the gain made by Mr Favaro on exchanging his Italian currency for Australian currency was an assessable capital gain.

Stakeholder feedback

The Board received extensive submissions in relation to the ATO's interpretation of the personal use exemption. Koinly noted that:

Whilst current guidance suggests the personal use asset rule is rarely applicable, the spending of crypto assets for personal use should be clarified. In most cases, crypto spending transactions lead to a taxable event that causes compliance issues, particularly when facilitated through crypto-linked spending cards.

Clarification is required as to how the rule applies with a view to simplifying the personal use asset rule. This is required when an individual purchases personal items or purchases of crypto assets as a hobby.⁴²¹

Blockchain Australia's submission highlighted the prevalence of hobbyist activity with crypto assets:

Subjecting all crypto assets and tokens to the capital gains tax regime also captures an unreasonably broad range of transactions from hobbies, recreational pursuits and pastimes. Such activities which lack a profit motive are normally disregarded by tax professionals as non-assessable from a revenue perspective (*Ferguson v FCT*, TR 2005/1). Excluding these activities into the scope of tax returns would be consistent with standard tax treatment and remove the increasing compliance burden for hobbyists and minors. Current guidance tends to disregard the notions of personal asset and collectable characteristics more readily than off-chain counterparts.⁴²²

419 ATO, *Cryptocurrency – personal use* (PBR Authorisation Number: 1051537413985, 9 July 2019).

420 ATO, *Cryptocurrency* (PBR Authorisation Number: 1051781223882, 24 November 2020).

421 Submission A10, 10.

422 Submission A36, 4.

Similar comments were made in other submissions, including:

- Australian Bitcoin Industry Body describing the entire purpose of bitcoin as being for it to be used to purchase items for personal use or consumption.⁴²³
- Blockchain & Digital Assets – Services + Law noted challenges for customers in using payment service providers.⁴²⁴
- The Joint Bodies and PwC both highlighted the need for clarification in relation to when an NFT may be a personal use asset.⁴²⁵

Board's conclusion – cryptocurrencies

Currently, there are limited situations where cryptocurrencies are considered by the ATO to be held and used exclusively for personal use purposes. In most instances, cryptocurrencies are held as part of a profit-making venture or as an investment rather than mainly for personal use and enjoyment.

In this regard the Board considers that the ATO position in relation to the limited application of the personal use exemption to cryptocurrency is the correct approach. The Board notes that it should be the asset's use rather than the use of any liquidated funds that are relevant in making this determination.

ATO position – other digital assets

The ATO's personal use asset guidance is generally limited to cryptocurrencies, with the exception of the following statement in relation to NFTs:

As with other types of crypto asset, in rare circumstances you could hold an NFT as a personal use asset.⁴²⁶

In relation to edited PBRs providing consideration as to the treatment of NFTs as personal use assets, the Commissioner accepted that NFTs representing digital artworks were personal use assets in PBR 1051976096088, however there is limited detail provided in the explanation.⁴²⁷ This is contrasted with PBR 1051694175099 where NFT artworks used in games were not found to be personal use assets.⁴²⁸

The Board agrees with stakeholder representations that there is a lack of clarity about how the personal use exemption may apply in relation to other types of crypto assets, particularly in the GameFi environment and across the many and varied uses of NFTs.

423 Submission A16, 5.

424 Submission A27, 23.

425 Submission A33, 6; Submission A26, 20.

426 '[Non-fungible tokens](#)', ATO (Web Page, 30 June 2023).

427 ATO, *Crypto assets – personal use* (PBR Authorisation Number: 1051976096088, 25 May 2022).

428 ATO, *Cryptocurrency – non-fungible tokens* (PBR Authorisation Number: 1051694175099, 1 October 2020).

Recommendation 7.4

ATO website guidance states that in rare circumstances an NFT can be held as a personal use asset and so be eligible for CGT concessions. There are also edited private binding rulings on the ATO website dealing with specific examples where the ATO has agreed or disagreed that the NFT in question is held as a personal use asset.

There is an increasing and varied use of NFTs, including within the GameFi space, and the circumstances in which an NFT can be held as a personal use asset may be increasing. Taxpayers therefore need access to information and guidance in relation to NFTs and personal use assets upon which they can rely to ensure their tax disclosures will be acceptable to the ATO.

The Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop further guidance with examples as to when the CGT personal use asset rules apply to NFTs.

Taxation of financial arrangements

Where TOFA applies, a key issue is determining whether a particular arrangement constitutes a ‘financial arrangement’. In broad summary, the definition of financial arrangement in section 230-45 of the ITAA 1997 refers to an arrangement that has one or more cash settable legal or equitable rights to receive or provide a financial benefit. A number of financial arrangements are expressly excluded (for example section 230-450 of the ITAA 1997 includes an exception for certain short term arrangements involving the acquisition or disposal of non-money amounts).

As far as the Board is aware, the current ATO guidance regarding crypto assets is largely silent regarding the application of the TOFA measures to crypto assets (and digital assets more broadly). The Board notes that this may be understandable given the particular target market to which much of the ATO guidance is directed (e.g. individual taxpayers that may be expected to have no need to consider the application of the TOFA rules in the preparation of their income tax returns).

The Board notes that there is one published edited extract of a PBR that considers the application of TOFA to crypto assets.⁴²⁹ As set out in Chapter 6, reliance upon edited PBRs will not provide a taxpayer with protection from tax shortfalls or penalties. The PBR is lengthy, complex and concerns, as is relevant to crypto assets, the application of the TOFA rules to two arrangements:

- transactions entered into by a bot to ‘simultaneously swap cryptocurrency types to arbitrage from short term differences in crypto currency conversion rates’ The PBR refers to these transactions as the ‘arbitrage function’

429 ATO, *TOFA – Division 230 ITAA 1997 – cryptocurrency arbitrage function and investments and bullion investments* (PBR Authorisation Number: 1051972615838, 12 April 2022).

- other cryptocurrency holdings – this covered long-term crypto currency investments and stablecoin holdings held for conversion to cash. The PBR refers to these transactions as ‘cryptocurrency holdings’.

The conclusion in the PBR is that the TOFA rules are not applicable to the above transactions. The analysis in the PBR is complex and presented using a series of tables. It is difficult to interpret the exact conclusions but in summary, it appears that the Commissioner’s views are as follows:

- Because the purpose of the transactions was to acquire crypto currency and a right to receive cryptocurrency is not a cash settleable right, the crypto currency holdings transactions are not financial arrangements.
- The transactions in respect of the arbitrage transactions were potentially financial arrangements on the basis of a number of specific provisions. This includes provisions that relate to dealing in rights or obligations in order to generate a profit from short term fluctuations in prices and (provisions that can apply where to financial benefits readily convertible into money or money equivalent where there is a market for the financial benefit that has a high degree of liquidity. However, the exception for certain short term arrangements involving the acquisition or disposal of non-money amounts in section 230-550 of the ITAA 1997 was held to be applicable, with the result that TOFA was not then applicable.

The Board received feedback regarding the lack of certainty regarding the potential application of the TOFA rules to crypto transactions.⁴³⁰

The Board agrees with stakeholder representations that there is a lack of clarity as to how the TOFA measures apply to crypto assets.

Recommendation 7.5

The Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop guidance regarding the manner in which common crypto asset transactions may be treated under the TOFA rules.

Deductions

The Board received limited feedback in relation to deductions for crypto asset activities, however KPMG highlighted the need for further guidance in relation to what deductions are allowable and in what circumstances (giving as an example, network fees).⁴³¹

430 Submission A26, 22; Submission A38, 3; Submission A39, 4; Submission A32, 8.

431 Submission A30, 13.

Observation 7.3

The Board observes that crypto asset users may incur expenditure in undertaking their activities. This expenditure may be deductible to a taxpayer in accordance with the existing law under section 8-1 of the ITAA 1997.

Treatment of Losses

During the consultation process, there was some discussion as to whether losses derived from digital assets and transactions should be quarantined, regardless of whether they are characterised as being on revenue or capital account. If this were to occur, crypto-related losses could only be deducted against crypto-related gains. There is some precedent for quarantining losses in other areas, for example, losses from non-commercial business activities in Division 35 of the ITAA 1997.

If implemented, this would be a revenue-protection measure in recognition of the highly volatile prices of crypto assets. Some have argued that permitting crypto-related losses to be offset against other types of assessable income (such as salaries) constitutes the Government effectively subsidising crypto losses. Whilst any gains are commensurately assessable, there may be some concern that crypto losses will be more readily claimed to be on revenue account, whereas crypto gains may be more readily claimed to be on capital account and eligible for the CGT discount. In this regard, it is noted that one rationale for the government in 2012 limiting the trading stock exception for superannuation funds (see next section) was that the general industry practice was to tax gains and losses on share transactions according to the CGT provisions, however 'during the recent economic downturn, a number of superannuation entities sought, for the first time, to treat some of their shares as trading stock'.⁴³²

Another way to manage this different treatment between losses on revenue account and losses on capital account would be to deem all crypto assets to be held on either revenue or capital account – see Chapter 13.

Whether losses from activities in the crypto ecosystem should be quarantined is a matter of policy for the Government to consider.

Observation 7.4

Whether the legislation should be amended to quarantine revenue losses from crypto assets and transactions is a policy issue for the Government.

432 Explanatory Memorandum, Tax Laws Amendment (2012 Measures No 1) Bill 2012 [2.4] – [2.5].

Source

Challenges in establishing the source of crypto asset transactions

The Board heard that the decentralised and pseudo-anonymous features of crypto asset users may create challenges in establishing the facts relevant to determining the source of gains or losses from crypto asset transactions. Consideration such as the place of execution of a contract⁴³³ and performance of the contract⁴³⁴ are not easily identifiable or necessarily applicable to crypto asset transactions. The following outlines some of the challenges that were raised with the Board in consultations.

In particular, a number of features of crypto asset transactions may raise challenging issues having regard to the traditional manner in which the common law has determined the source of income. For example:

- Crypto assets use of blockchain technology which effectively implements transactions by recording them, with such recording in a decentralised ledger that could have thousands of nodes located around the world. There is no need to rely on traditional transfer mechanisms and transactions through market participants and financial intermediaries.
- It may be particularly difficult, or for all practical purposes impossible, to identify the counterparty to a transaction (and therefore where that counterparty is located).
- Crypto asset transactions occurring on a blockchain do not have traditional forms of written contracts.⁴³⁵

PwC explained the challenges in identifying source, noting:

... there is currently no guidance on the source of income arising from blockchain events (e.g. staking rewards, gas fees, gains on disposal of digital assets where the asset is held on revenue account). While these are only limited situations where this would impact the tax outcome (for example, where the relevant taxpayer was a non-resident and the income is sourced in Australia), it is unclear whether it is even possible to identify a source for this type of income, where it is not possible to identify:

- a counterparty to the transaction
- the location of the counterparty if one can be identified, or
- the location where a smart contract is executed.⁴³⁶

PwC also referenced a US Securities and Exchange Commission (SEC) lawsuit, understood to be, *Civil Action No. 1: 22-CV-950*⁴³⁷ from September 2022, noting that the SEC:

... claimed that all transactions on the Ethereum network took place in the US, as the transactions are validated by nodes on the Ethereum blockchain, and those nodes are

433 *Tariff Reinsurances Limited v C of T (Vic)* (1938) 59 CLR 194.

434 *Sixsmith v C of T* (1928) 28 SR (NSW) 456, 461–464.

435 Although there will ordinarily be written contracts where third-party intermediaries are involved.

436 Submission A26, 21.

437 *U.S. Securities and Exchange Commission v Balina* (United States District Court Western District of Texas Austin Division, Civil Action NO. 1:22-CV-950, 19 September 2022).

clustered more densely in the US than in any other country. This position (if held to be correct) is likely to have implications as to the source of income earned from transactions taking place on the Ethereum network, and highlights the needs for globally aligned rules dealing with source of income from digital assets and transactions.⁴³⁸

The Board's Position

The above stakeholder feedback confirms that many crypto asset users and their advisers consider that there can be practical difficulties in establishing the source of gains from crypto asset transactions under general principles, such as the practical inability to identify the counterparty to the transaction and the location of the counterparty even if one could be identified, and the location of execution of the transaction.

The Board notes that these issues are not necessarily unique to crypto assets, that common law principles have traditionally shown the capacity to adapt to newer forms of commerce, and that there is a good basis for expecting that the application of common law principles of source to crypto assets will become clear in the future, including with judicial guidance:

Time and again over the years the common law has accommodated technological and business innovations, including many which, although now commonplace, were at the time no less novel and disruptive than those with which we are now concerned.⁴³⁹

Furthermore, it may be that the question of source of crypto asset income is not overly complex because it may be that the correct reflection of the law relating to 'source' in the crypto ecosystem is:

- In the context of on-chain crypto asset transactions: regard should be had not to the location of any 'counterparty' or any network on which the transaction occurs, but instead to the location of the work that is done by a taxpayer to derive the assessable income.⁴⁴⁰
- In the case of miners (on proof of work networks) or stakers/validators (on proof of stake networks), the source of any reward they make, may simply be the location of the work that they do, which in the case of validators would include the steps taken to stake their cryptocurrency on the blockchain. In a similar way, the source of the income of a call centre that makes calls around the world will be the location of that call centre, notwithstanding that it uses communications equipment situated around the world to speak to people around the world. Just as fees are paid to access that communications equipment, crypto users pay transaction fees to interact with the network.
- In the case of smart contracts, the source of any income that a user derives may simply be their location when they take the steps required to initiate the self-fulfilling smart contract.

438 Submission A26, 21.

439 UK Jurisdiction Taskforce, [*Legal Statement on Cryptoassets and Smart Contracts*](#) (Statement: The LawTech Delivery Panel, November 2019) 4.

440 'If a person by himself or by his servants or agents does work of some kind or acts in some way he may derive income from that work or act': *FC of T v United Aircraft Corporation* (1943) 68 CLR 525 at 536 (Latham J).

- In the case of off-chain arrangements, such as arrangements involving centralised exchanges, the general principles to determine source should apply, just as off-chain arrangements have been found in cases to be subject to the common law principles of contract, trust and tort.⁴⁴¹

However, at the current stage of understanding of the law in this area and in the absence of judicial guidance, and as stated earlier in different contexts in this chapter, there is a current and will be a continuing need for increased detailed ATO guidance upon which taxpayers can rely to ensure that their taxation disclosures are acceptable to the ATO.

Recommendation 7.6

Many crypto asset users and their advisers consider that there can be practical difficulties in establishing the source of gains from crypto asset transactions under general principles.

The Board recommends that the ATO in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group develop guidance in relation to the source of ordinary income from crypto asset transactions, upon which taxpayers can rely to ensure that their tax disclosures will be acceptable to the ATO.

The Board also recommends that the ATO monitor developments including international developments in relation to the issue of the source of income from crypto asset transactions, including positions taken by offshore authorities including for example the US IRS and the US Securities and Exchange Commission.

Valuation

As discussed earlier in this chapter, there are many circumstances in which it is necessary for a crypto asset user to determine the value of a crypto asset for the purposes of complying with the tax law (see under ‘Can non-cash transactions give rise to ordinary income’ above).

The Board has heard through the consultation process about the difficulties in valuing crypto assets, including in the submission from the Members of the Tax Profession, who stated:

Moreover, underpinning many of the issues that arise are concerns over valuation, particularly in combination with high volatility.⁴⁴²

For many crypto assets, a crypto asset valuation will be readily available from any one of the many exchanges on which the asset is traded. However, identifying the relevant value of a specific token at a point in time can be challenging as there is no standard pricing for crypto assets and different exchanges will list

441 For example see *Ruscoe v Cryptopia Limited (in liquidation)* [2020] NZHC 728; [2020] 2 NZLR 809 (Gendall J); *Tulip Trading Ltd (a Seychelles company) v Bitcoin Association for BSV and others* [2023] EWCA Civ 83; 4 WLR 16, [29].

442 Submission A08, 7.

the same token at different prices.⁴⁴³ The difficulty in finding the appropriate value is further compounded by the rapid price fluctuation. A transaction may occur at a point in time during the day, but by the time that the user logs into the system, the price may have changed significantly. The rigidity in utilising a value at the exact point that a transaction occurs is incongruous with the Board's Principle 1 aimed at achieving simplicity in the tax system.

Currently there is limited ATO guidance in relation to identifying market values for crypto assets, with the majority of the existing guidance focussed on the need to convert values to Australian dollars. For example, on its website the ATO has provided the following guidance:

You need to know the value of your crypto asset to determine if you make a capital gain or capital loss on the CGT event happening.

To work out the value of your crypto assets when you acquire or dispose of them you will need to convert their value to Australian dollars. From 1 January 2020, the ATO has used the exchange rates from the Reserve Bank of Australia. If you need daily foreign exchange rates, refer to Reserve Bank of Australia – Exchange rates. If you use a foreign exchange rate for currency not listed, you may use any reasonable externally sourced exchange rate for that currency.⁴⁴⁴

Additionally, in the ATO's guidance for crypto asset businesses, it is stated that 'One way of determining the value of a crypto asset in Australian dollars is using a fair market value published by a reputable crypto asset exchange.'⁴⁴⁵

While this acknowledges the ATO's acceptance of valuations published by exchanges, it provides limited assistance to a taxpayer in determining which exchanges the ATO will consider 'reputable' or what point in time valuation is acceptable to the ATO.

The Board notes that in other contexts, ATO guidance has addressed issues associated with valuations for specific assets. More broadly in relation to valuations, the ATO has published a guidance product *Market valuation for tax purposes*⁴⁴⁶ which is designed to assist in understanding the Commissioner's general expectations on market valuations for tax purposes. In the 'references' section of this guidance product, in Table 2, reference is made to 'ATO advice and guidance on market value for various tax topics'. There are specific links to various valuation guidance (e.g. CGT, and tax consolidation). The table includes a reference to 'Cryptocurrency' but the link is to the general ATO guidance rather than any specific valuation materials. The Board questions the utility in this reference.

The Board notes that previous ATO valuation guidance in relation to listed shares has allowed taxpayers to adopt the volume weighted average price of the shares over a certain period. This has assisted in smoothing the effects of illiquidity and the volatility of share prices over a short period.

443 ['Why Bitcoin Prices Differ Across Exchanges & How to Profit via Arbitrage'](#), *BYBIT Learn* (Web Page, 20 March 2023).

444 ['Crypto asset transactions'](#), *ATO* (Web Page, 30 June 2023).

445 ['Crypto assets used in business'](#), *ATO* (Web Page, 29 June 2022).

446 ['Market valuation for tax purposes'](#), *ATO* (Web Page, 29 August 2023).

The Board considers that guidance is required to support taxpayers in what is acceptable to the ATO in relation to the determination of market valuations of crypto assets. The Board considers that there is need for a commonsense approach to this determination, potentially incorporating the use of average valuations.

Recommendation 7.7

There are many circumstances in which it is necessary for a crypto asset user to determine the value of a crypto asset for the purposes of complying with the tax law.

The Board recommends that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop valuation guidance that is specific to crypto assets. Where appropriate, the ATO may wish to consider providing valuation guidance to allow averaging or other 'short-cut' methodologies to reduce compliance costs associated with the particular characteristics of crypto asset transactions.

Chapter 8: Income Tax – Specific Taxation Regimes

Key Points

- Crypto assets and transactions raise some policy issues for consideration in relation to specific provisions within taxing regimes including managed investment trusts, superannuation funds, fringe benefits, charitable donations and the not-for-profit sector.
- These policy issues are a matter for the Australian Government.

Introduction

This chapter builds on the work undertaken in Chapter 7 in relation to general tax issues. In this chapter, the Board considers the application to digital assets and transactions of taxation regimes in Australia's legislation that exist to deal with particular taxpayers or transactions. The relevance of these taxation regimes was identified in submissions to the Board as well as by the Board in its own deliberations. The specific regimes considered below are those relating to managed investment trusts, taxation of superannuation funds, fringe benefits tax and the not-for-profit sector, including charitable donations.

Managed Investment Trusts

A managed investment trust (MIT) is a collective investment vehicle that is afforded concessionary tax treatment. For example, payments made by a MIT to a foreign resident investor in a country which has an effective exchange of information agreement with Australia, are generally subject to a 15% withholding tax.⁴⁴⁷ A MIT may also be able to make a 'capital election' confirming that capital treatment will apply to certain 'covered assets'.

The MIT regime was established to improve the operation of the taxation law for managed investment trusts by increasing certainty, allowing greater flexibility and reducing compliance costs. The reform was intended to enhance the competitiveness of Australia's managed fund industry.⁴⁴⁸

447 A concessionary rate of 10% applies to a fund payment by a clean building MIT.

448 Explanatory Memorandum, The Tax Laws Amendment (New Tax System for Managed Investment Trusts) Bill 2015 1.8.

Some MITs are able to make an election to be treated as ‘attribution managed investment trusts’ (AMITs). Once a MIT elects to apply these rules, it is no longer taxed under the provisions of Division 6 of the ITAA 1936, and is then taxed under the AMIT rules in Division 276 of the ITAA 1997.

A detailed review of the existing framework for MITs and AMITs and associated issues is beyond the scope of the Board’s review. The Board did however receive feedback in relation to the potential inability of a collective investment vehicle that engages in crypto transactions to satisfy the qualification rules to be a MIT and in particular, the requirement that the trust not be a ‘trading trust’ or carry on a ‘trading business’ (or control another person that carries on a trading business).⁴⁴⁹ In light of having received these comments, the Board makes some comments in relation to this issue.

A trading business is defined in section 102M of the ITAA 1936 as a business that does not consist wholly of an ‘eligible investment business’, which in turn is defined to be one or more of:

- a) Investing in land for the purpose, or primarily for the purpose, of deriving rent; or
- b) Investing or trading in any or all of the following:
 - i) secured or unsecured loans (including deposits with a bank or other financial institution);
 - ii) bonds, debentures, stock or other securities;
 - iii) shares in a company, including shares in a foreign hybrid company (as defined in the *Income Tax Assessment Act 1997*);
 - iv) units in a unit trust;
 - v) futures contracts;
 - vi) forward contracts;
 - vii) interest rate swap contracts;
 - viii) currency swap contracts;
 - ix) forward exchange rate contracts;
 - x) forward interest rate contracts;
 - xi) life assurance policies;
 - xii) a right or option in respect of such a loan, security, share, unit, contract or policy;
 - xiii) any similar financial instruments; or
- c) investing or trading in financial instruments (not covered by paragraph (b)) that arise under financial arrangements, other than arrangements excepted by section 102MA.⁴⁵⁰

449 See ITAA 1936 ss 102N, 102M.

450 ITAA 1936 s 102M.

The above items do not specifically include crypto assets and crypto assets do not obviously fall within any of the categories referred to above.⁴⁵¹ Accordingly, a collective investment vehicle that engages in crypto asset transactions will not apparently be eligible to be a MIT.

Even if a collective investment vehicle that engages in crypto asset transactions could be an MIT, any capital election that it made would not apply to crypto assets, which are not included in the list of covered assets (section 275-105 of the ITAA 1997). The list in section 275-105 broadly covers shares and non-share equity interests in a company, units in a unit trust, land including interests in land, and rights or options in respect of any of these.

The Board received a number of submissions in relation to the inability for a managed fund investing to crypto to meet the eligibility requirements or, should the trust be eligible, elect capital treatment on disposal of crypto assets. In relation to both these issues, EY recommended:

If the policy intention is to support the growth of active investment management services in respect of cryptocurrencies in Australia, we recommend that a specific paragraph addressing cryptocurrencies is included in the definition of EIB to enable cryptocurrency to qualify as EIB.

and

If the definition of EIB in section 102M of ITAA 1936 is amended to include direct investment in cryptocurrency, we recommend that a corresponding amendment is made to the definition of 'covered asset' in section 275-105 of ITAA 1997 to allow gains realised on trading cryptocurrencies to qualify for deemed capital account treatment.⁴⁵²

HopgoodGanim Lawyers explained why they considered this was important:

... to ensure parity with qualifying MITs investing in such assets, section 275-105 should be amended to clearly include cryptocurrencies, sovereign digital currencies and other similar crypto-assets.

Further, in order to provide certainty that such crypto funds are able to access the flow-through taxation treatment that the Board has regarded as an important design feature of an attractive fund manager regime, investment and trading in cryptocurrencies, sovereign digital currencies and other similar crypto-assets should be expressly included as a type of "eligible investment business"⁴⁵³

451 Noting that a 'financial arrangement' is defined in ITAA 1936 102M as having the same meaning as in the ITAA 1997, which in turn relies on the involvement of cash and money, the latter of which is defined by reference to its definition in the *A New Tax System (Goods and Services Tax) Act 1999* (GST Act) (ITAA 1997 sub-s 995(1), ss 230-45–230-55). The GST Act defines 'money' largely (although not exclusively) by reference to 'currency' which is referred to in terms of being issued by a country. The definition of 'money' also refers to payment by way of 'creation or transfer of a debt' which, in context, may be expected to refer to a debt relating to currency.

452 Submission A20, 20.

453 Submission A22, 4.

Similar representations were made by Gilbert + Tobin, PwC, Law Council of Australia, Financial Services Council, Blockchain & Digital Assets – Services + Law, Blockchain Australia, King & Wood Mallesons, Cadena Legal and the Joint Bodies.⁴⁵⁴

The question of whether the definition of eligible investment should be expanded in respect of cryptocurrencies is a policy question for the Australian Government. Should the Government decide to consider this issue, the Board notes that there is a wider issue as to whether the definition of eligible investment business in section 102M of the ITAA 1997 needs to be the subject of ongoing amendment to keep pace with developments in financial products. The Board considers that the wider policy issues associated with amending the definition of eligible investment business to include additional specific asset classes should be considered as part of any consideration of whether to extend the definition to include crypto assets.

Observation 8.1

Whether the legislation should be changed to permit a managed investment trust to engage in crypto asset transactions, and whether crypto asset transactions should be covered by the capital election, is a policy issue for the Australian Government.

Superannuation Funds

In Australia, there are five main types of superannuation funds: Industry funds, Retail funds, Public Sector funds, Corporate funds, and Self-managed superannuation funds (SMSFs). ASIC and the Australian Prudential Regulation Authority (APRA) are primarily responsible for the supervision of the Corporations Act and the *Superannuation Industry (Supervision) Act 1993* (SIS Act) respectively. The ATO is the primary regulator in relation to SMSFs. Superannuation trustees also have important reporting and administrative obligations to the ATO,⁴⁵⁵ and crypto assets must be included in satisfying these reporting obligations.

A SMSF is a superannuation fund that is generally set up and managed by an individual or family group.

Superannuation fund trustees are required to manage the fund's investments in the best financial interests of fund members⁴⁵⁶ and the fund's investment must be for the sole purpose of providing retirement benefits to members⁴⁵⁷. The Board notes that as a SMSF is subject to less regulatory oversight and public scrutiny, there is an increased risk associated with crypto asset investment through these funds over APRA regulated funds.

454 Submission A19, 32; Submission A24, 6; Submission A26, 23; Submission A27, 21; Submission A32, 7; Submission A33 20–21; Submission A36, 3; Submission A38, 3; Submission A39, 3.

455 '[ASIC's role in super](#)', *Australian Securities and Investments Commission (ASIC)* (Web Page, accessed 19 January 2024).

456 *Superannuation Industry (Supervision) Act 1993* (SIS Act) para 52(2)(c).

457 SIS Act s 62.

As at 30 June 2022, there were over 603,000 SMSFs in Australia, collectively holding assets of \$868.7 billion.⁴⁵⁸ SMSF trustees are subject a number of strict tax and regulatory conditions in relation to how the fund may be operated and the manner in which it may make investments.

Superannuation funds are subject to various reporting obligations with the ATO. For SMSFs, this includes the provision of a market value breakdown of the amount invested by the fund across relevant asset classes as part of their annual tax return disclosures. As at 30 June 2022, the most popular asset classes held by SMSFs were listed shares (30.4%), cash and term deposits (16.9%) and non-residential real property (8.1%).⁴⁵⁹ Investments not falling under one of the categories listed on the return are grouped together as 'All other assets'. As crypto assets are not one of the available categories, there is no reliable data to indicate what portion of SMSFs are holding crypto assets.

It is however apparent that SMSF trustees are choosing to invest in crypto assets, and as noted by the SMSF Association:

It is concerning to see the increase in spruiking activity around these assets. A range of investors are targeted, including SMSFs and inexperienced investors. The promotion of these products is at times accompanied by misleading taxation advice including the promotion of tax exemptions. The inability to obtain professional advice, the lack of credible guidance and consumer education materials has created a vacuum which enables these activities to flourish.⁴⁶⁰

As regulator of SMSFs, the ATO provides guidance on its website in relation to SMSF investment in crypto assets and regulatory requirements. The guidance sets out that SMSFs are not prohibited from investing in crypto assets, but they must:

- be allowed under the fund's trust deed
- be in accordance with the fund's investment strategy
- comply with the same regulatory requirements as apply to other investments.⁴⁶¹

APRA provided a letter to all APRA-Regulated entities in April 2022 titled 'Crypto-Assets: Risk Management Expectations and Policy Roadmap', setting out APRA's initial risk management expectations for all regulated entities that engage in activities associated with crypto assets, noting that these entities need to engage with their responsible supervisor if they are undertaking such activities.⁴⁶²

While extensive feedback in relation to superannuation funds was not received throughout the consultation process, the Board notes that a number of issues including the following were raised:⁴⁶³

- How crypto assets should be valued for SMSF purposes.

458 ['SMSF profile'](#), ATO (Web Page, 20 February 2023).

459 ['Investment profile'](#), ATO (Web Page, 20 February 2023).

460 Submission A23, 1.

461 ['SMSF investing in crypto assets'](#), ATO (Web Page, 29 June 2022).

462 [Letter from Wayne Byres APRA Chair to All APRA-Regulated Entities](#), 21 April 2022.

463 Submission A23, 2.

- Recognition of ownership of crypto assets and record keeping requirements.⁴⁶⁴
- The application of the trading stock exemption under section 295-85(4) of the ITAA 1997.

In relation to the trading stock exemption, in accordance with section 295-85(2), CGT is the primary code for assessing complying superannuation funds on CGT events, rather than the other provisions that would otherwise (i.e. in the absence of subsection 295-85(2)) take priority (such as section 6-5 ordinary income). An exception is for trading stock,⁴⁶⁵ which will still be assessed under the trading stock provisions in Division 70. However, subsection 70-10(2) provides that trading stock for a complying superannuation fund does not include an asset covered by section 275-105 (broadly shares and other equity interests in a company, units in a unit trust, land, and rights or options in relation to any of these – see above under Managed Investment Trusts). It follows that a complying superannuation fund transacting in the section 275-105 ‘covered assets’ will be assessed under the CGT regime and therefore eligible for the CGT discount on gains (although capital losses may only be offset against capital gains). The SMSF Association indicated that it would welcome the inclusion of crypto assets in this list.

There appears to be a clear policy underpinning the taxation of superannuation assets that, while CGT is to be the primary code, items of trading stock are generally not given that exclusive treatment. While an exception is made for land, shares and units, other asset classes do fall within the exception (e.g. financial assets, other property and contractual rights). Accordingly, the Board is of the view that adding a further exception to the treatment of superannuation fund held trading stock is not compelling.

Observation 8.2

SMSF trustees are currently facing challenges in complying with their obligations under the *Superannuation Industry (Supervision) Act 1993* and associated regulations.

Superannuation trustees who choose to engage in crypto asset transactions face similar income taxation issues as those faced by other taxpayers who choose to engage in crypto asset transactions. In addition, they must comply with applicable regulatory requirements.

It was put to the Board that crypto assets should be taxed to superannuation funds in the same way as shares, units in unit trusts and land for superannuation funds – that is, under the CGT provisions. It is the Board’s view that that adding a further exception to the treatment of superannuation fund held trading stock is not compelling.

Fringe Benefits Tax

The ATO has issued [TD 2014/28](#) *Fringe benefits tax: is the provision of bitcoin by an employer to an employee in respect of their employment a property fringe benefit for the purposes of subsection 136(1) of*

464 See also Submission A20, 17.

465 ITAA 1997 Item 5 in the table in sub-s 295-85(4).

the *Fringe Benefits Tax Assessment Act 1986*? (TD 2014/28) and provided web guidance in relation to carrying on a business and remunerating employees.⁴⁶⁶

The ATO sets out that where an employee has a valid salary sacrifice arrangement to receive crypto assets as remuneration instead of Australia dollars, the payment is a property benefit. In the absence of a salary sacrifice agreement the employee receives their normal salary and wages, and the payment is subject to pay as you go (PAYG) withholding and superannuation obligations. This situation may arise where the employee directs the employer to satisfy their salary obligation by transferring an equivalent value of crypto assets.⁴⁶⁷

No published edited PBRs have been identified in relation to wage payments and crypto assets.

For completeness, the Board notes that when an entity transfers crypto assets to an employee (or to any other party) in satisfaction of a wage or other obligation, that the entity will make a disposal of that crypto asset and the resulting tax consequences will need to be considered (see further in Chapter 7).

Some submissions to the review raised a broader concern about the ability for a wage to 'paid' in crypto under employment law.⁴⁶⁸ If this is not possible, there are concerns about the suitability of the position taken in TD 2014/28.

The Board has not made an observation in relation to this issue, noting that matters of wage payment and employment law are not within the remit of the Board.

Charitable donations

Crypto assets are increasingly being used for transactions that typically would have been undertaken using fiat currency in the past. One area where this is apparent is with philanthropy and donations.

In May 2022, the University of New South Wales Sydney announced that it had received a USD Coin 4 million cryptocurrency donation, which it described as the largest known cryptocurrency donation to an Australian higher education institution.⁴⁶⁹ Major charities, including UNICEF Australia⁴⁷⁰ and Oxfam Australia⁴⁷¹ provide facilities through their websites to enable cryptocurrency donations. The Board's observations on this emerging space follow.

466 ['Crypto assets used in business'](#), ATO (Web Page, 29 June 2023).

467 ITAA 1997 sub-s 6-5(4).

468 Including Submission A25, 5; Submission A26, 26; Submission A27, 3; Submission A19, 33.

469 Lucienne Bamford, ['Major crypto gift boosts UNSW's fight against future pandemic'](#), UNSW (Web Page, 13 May 2022).

470 ['Donate Cryptocurrencies'](#), Unicef Australia (Web Page, accessed 5 December 2023).

471 ['Donate crypto to Oxfam Australia'](#), Oxfam Australia (Web Page, accessed 10 January 2024).

Deductible gift recipients

The Australian Charities and Not-for-profits Commission (ACNC) and the ATO both have a role in relation to the endorsement and regulation of charitable organisations. The ACNC is the national regulator of charities and endorses entities as charities for Commonwealth purposes, although an entity that is seeking to access tax concessions as a charity, and/or receive deductible gift recipient (DGR) status, must apply to the ATO for endorsement.

The ACNC have published a guide on their website in relation to charities and crypto assets, covering:

- accepting crypto assets as donations
- investing in crypto assets
- recording and reporting crypto-donations in the Annual Information Statement
- regulation of crypto assets.⁴⁷²

At a high level, the guidance sets out the risks associated with a charity investing in and receiving crypto assets, the additional governance required to manage this and associated reporting obligations. The ACNC neither prohibit nor endorse the receipt or holding of crypto assets by charities.

The ATO also provide web content in relation to the tax obligations of charities that are in receipt of crypto assets. This guidance sets out that:

- there are no CGT implications at the time the crypto asset is received
- a CGT event may happen with a later disposal or transaction with the crypto asset
- the charity must check that it has the capacity to receive crypto assets
- the charity must ensure it keeps the required records of the receipt
- the charity must check that the ownership of the crypto asset is transferred into its legal name⁴⁷³ (which will presumably be satisfied if the crypto assets are controlled by the charity for example by a private key that is they hold or that is held for them by another, or under a custodial arrangement with an intermediary).

The Law Council of Australia provided proposals including the following in their submission to the Review in relation to charities and not-for-profit entities:

- The Ministerial Guidelines for Private Ancillary Funds and Public Ancillary Funds should be altered to include provisions about digital assets in relation to investment strategy or investment limitations and distributions in digital assets.

472 [‘Charities and crypto-assets’](#), Australian Charities and Not-for-profits Commission (ACNC) (Web Page, accessed 19 February 2024).

473 [‘Gifts and donations of crypto assets’](#), ATO (Web Page, 30 June 2023).

- It is likely that Distributed Ledger Technologies will be able to streamline the operations of DGRs and charities that operate overseas, and the ATO and/or the ACNC should consider providing guidance in relation to prudent governance in relation to fraud, money laundering, and terrorism financing. It may be that ACNC governance standards require amendment to cater for such developments which are proportionate to the risk and do not hamper beneficial innovation.
- The Board should also consider the principles of taxation for new legal forms associated with DAOs that are formed for altruistic purposes akin to what are known as giving circles (groups of individuals who donate money and/or time and have a say in the distribution of these resources).⁴⁷⁴

The Board notes that any consideration of reform in the area of charities and not-for-profit entities would require an analysis of the policy objectives, engagement with government stakeholders (including the ACNC) and targeted industry consultation.

Observation 8.3

Various reforms in the area of charities and not-for-profit entities in relation to digital assets were suggested to the Board. It is the Board's view that there are broader considerations involved than just taxation affecting charities and not-for-profit entities and as such these are matters of policy for the Australian Government to consider.

Deductions for donations

The concept of tax deductibility for donations is widely promoted by charities and consequently there is a broad community understanding of the linkage between charitable donations and obtaining a tax deduction.

In determining the actual entitlement to a deduction for a gift or contribution, consideration must be provided to factors including:

- who the recipient of the gift or contribution is
- the type of gift or contribution that can be made
- how much can be deducted for the gift or contribution
- any special conditions that apply.⁴⁷⁵

Section 30-15 of the ITAA 1997 contains a table setting out gifts or contributions that taxpayers can deduct, including details of eligible recipients, the type of gift or contribution, how much can be deducted and any special conditions.

474 Submission A39, 4–5.

475 ITAA 1997 s 30-15.

The first type of recipient in the table (item 1) is 'A fund, authority or institution covered by an item in any of the tables in Subdivision 30-B'. The subdivision 30-B tables are divided into different categories (such as health, education, welfare and rights) and list certain types of entities (e.g. public hospitals) as well as specific entities (such as the New South Wales College of Nursing). Item 2 of the Table in section 30-15 deals with ancillary funds.⁴⁷⁶

For item 1 and item 2 DGRs, there are specific rules that deal with deductions that are available and associated valuation requirements, where property is donated to a DGR. On the basis that crypto assets are property (refer Chapter 4 of the Report) these rules are applicable to crypto assets and are summarised below:⁴⁷⁷

Asset holding period and type	Treatment
Held < 12 months other property	Deduction equal to lesser of cost or market value
Held < 12 months and property is listed shares	Deduction equal to the market value of the shares
Held > 12 months and market value less than \$5,000	No deduction
Held > 12 months and market value more than \$5,000	Deduction equal to market value as determined by the Commissioner

Other items in section 30-15 of the ITAA 1997 also permit deductions for donations of property, with the amount of the deduction based on the market value of the property.

PwC noted the valuation issues in their submission and proposed a simplified approach in relation the need to obtain valuations:

Current tax rules providing a deduction for donations of property to DGRs or other recognised organisations require a valuation to be obtained from the Commissioner where the Commissioner values the gift at more than \$5,000, and the property was purchased more than 12 months ago or the donor did not purchase the property (for example, it was won or inherit). The ATO charges a fee for this valuation equal to the cost of obtaining the valuation.

As this may be seen as a barrier to donating digital assets (which under the current law are treated as property), we suggest considering the introduction of an alternative approach or a streamlined process for obtaining valuations. For example, the law could be amended to remove the valuation requirement in circumstances where the deduction is calculated based on the value of digital assets according to specified trusted exchanges, similar to the 2015

476 ITAA 1997 s 30-15.

477 Note that the summary is general only – specific rules apply in certain circumstances (e.g. in respect of assets that constitute trading stock).

proposal⁴⁷⁸ to remove the need to obtain a valuation for donations of listed shares and managed funds greater than \$5,000.⁴⁷⁹

The Law Council of Australia highlighted the need for the ATO to provide guidance in relation to the valuation requirements.⁴⁸⁰

It is therefore apparent that the current limitations on donations of property result in inconsistent tax outcomes for taxpayers that donate crypto assets directly as compared with those liquidating crypto assets prior to donation. This is particularly relevant where the crypto asset has been held for more than 12 months and is valued at under \$5,000 and no deduction is available, however the disparity exists across all circumstances. For short-term holdings the deduction limited to the lesser of cost or market value and for high value long term holdings, a valuation must be sought from the Commissioner.

The Board notes, however, that the current discrepancy could be overcome by liquidating the crypto assets prior to donation – that is, disposing of the digital asset for fiat currency. As there may be CGT implications for the disposal of the digital asset in both circumstances, it is not readily apparent that there is a disincentive to a taxpayer taking this step, and a legislative change or administrative measure to deal with the situation where the taxpayer chooses to not liquidate the crypto assets prior to donation, may not be justified.

Observation 8.4

Donations of crypto will be treated as donations of other forms of property, which gives rise to the same valuation issues for crypto as in other income tax contexts. However, there is an added complexity for donations of property held for more than 12 months and valued at more than \$5,000, as the value must be determined by the Commissioner.

As this issue can be avoided by a taxpayer simply liquidating the crypto asset prior to donation, it is not apparent to the Board that any measure (whether legislative or administrative) is required to deal with this issue.

Not-for-profit sector

In addition to the general taxation issues that are raised in this Report, specific issues arise for the not-for-profit sector in relation to crypto assets. The Board has not undertaken a detailed review of crypto issues specific to the not-for-profit sector, but acknowledges that issues including the following may arise:

478 The Hon Josh Frydenberg MP, *'Measures to boost philanthropy in Australia'* (Media Release, 28 May 2015).

479 Submission A26, 22.

480 Submission A39, 4.

- Public and Private Ancillary funds are in some cases to estimate the value of net assets for the purposes of minimum annual distribution requirements, which raises issues relating to the valuation of any crypto assets they may hold and/or distribute.
- Public and Private Ancillary funds are required to maintain an investment strategy that considers, among other things, the risk and the expected return of making certain investments. Holdings of crypto assets may be relevant to these issues.
- Integrity concerns may arise in relation to not-for-profit entities who hold crypto assets as it may be more difficult to monitor the use to which crypto assets are put: the diversion of these assets to purposes inconsistent with the entity's purposes may be easier to achieve and more difficult to monitor.

Observation 8.5

The receipt, holding and distribution of crypto assets raise particular issues, including integrity and risk issues, for not-for-profit entities which may often be under-resourced and operated by volunteers without the expertise to deal in crypto assets.

Holdings in crypto assets may also impact compliance obligations of public and private ancillary funds.

The interaction of crypto assets and transactions with the not-for-profit sector is an area that the Government may like to consider in the future.

Chapter 9: Income Tax – Specific Digital Asset Transactions

Key Points

- Particular transactions of significance to Australian taxpayers can be identified in the context of different stages in the lifecycle of cryptocurrency.
- Accordingly, the board has ‘mapped’ the lifecycle of cryptocurrency and identified four distinct stages: acquiring, holding, evolution, and disposing of cryptocurrency.
- Taxpayers and their advisers would benefit from comprehensive guidance upon which they can rely from the ATO in relation to taxation transactions including mining, staking/validating, airdrops, and DeFi transactions.
- In light of the complexity and the quickly and continually evolving nature of crypto asset transactions and DeFi in particular, Board recommends that there be no new legislation to establish a new and prescriptive taxation regime to deal with crypto and in particular DeFi transactions (including bridging and wrapping) at this time, as the Board considers that this would lead to more complexity and potentially more uncertainty.
- To assist taxpayers to ensure that their taxation disclosures are acceptable to the ATO, the Board recommends that the ATO consider whether it can explore with the Crypto Industry Working Group any potential acceptable simple and practical solutions to determining the correct assessable income derived by a taxpayer from DeFi transactions.

Introduction

Chapter 7 considered the current Australian taxation treatment of digital assets and transactions by first explaining tax principles that are fundamental to Australia’s tax framework, and then discussing how these can apply to crypto assets and transactions, and particular issues that arise.

Chapter 8 considered specific taxation regimes and how they may apply to digital assets and transactions, identifying some issues requiring clarification and some issues that are matters of policy.

Chapter 9 approaches the question of the current Australian taxation treatment of digital assets and transactions from the perspective of particular common crypto asset transactions that raise more challenging tax questions. These transactions typically relate to digital transactions and tokens that are entirely ‘on-chain’ – that is, tokens that are commonly referred to as payment tokens (see Chapter 4), or cryptocurrencies.

The approach in this chapter is consistent with a number of submissions to the Board which proposed that the taxation of digital assets and in particular cryptocurrencies might best be considered by focussing on specific crypto asset transactions. These submissions proposed that different crypto asset transactions might best be understood by mapping the lifecycle of cryptocurrency. The submissions proposed ways in which this lifecycle might be mapped with an emphasis on the events which give rise to taxation issues that are currently of particular interest to participants in the crypto ecosystem and their advisers.

The OECD demonstrated this mapping approach in its 2020 publication ‘Taxing Virtual Currencies’ when it described the ‘typical lifecycle’ of a unit of cryptocurrency, emphasising the key stages in which the tax consequences for a unit of cryptocurrency might arise.⁴⁸¹

The Board agrees that in considering the taxation implications of cryptocurrency, it can be helpful to undertake a mapping exercise of the typical lifecycle of a unit of cryptocurrency.

The first section in this Chapter 9 therefore maps the lifecycle of a unit of cryptocurrency. This mapping exercise draws particularly (although not exclusively) on submissions made to the Board in the course of the Review. The lifecycle stages identified are: acquiring cryptocurrency, holding cryptocurrency, the evolution of cryptocurrency, and disposing of cryptocurrency.

The subsequent sections in this chapter consider the current Australian taxation treatment of common crypto asset transactions within the framework of mapped lifecycle, focussing on transactions which the Board’s consultation processes indicated were of particular interest to stakeholders.

Mapping the Lifecycle of Cryptocurrency

The explanation in the following paragraphs should be read with the explanation of digital assets and transactions in Chapters 3 and 4.

The OECD has identified the following stages in the ‘typical lifecycle’ of cryptocurrency: Creation; Storage and Transfer; Exchange; and Evolution.⁴⁸² Somewhat similarly, Capaccioli has identified the following typical stages in the lifecycle of cryptocurrencies: Emission, Storage, and Use.⁴⁸³

The Board has identified the following stages in the typical lifecycle of a unit of cryptocurrency:

- acquiring
- holding
- evolution
- disposing.

481 OECD, *Taxing Virtual Currencies* (n 6) 13–15.

482 OECD, *Taxing Virtual Currencies* (n 6) 13–15.

483 Capaccioli, *Taxation of Cryptocurrencies* (n 137).1–7, 3).

Acquiring Cryptocurrency

The method of the acquisition of cryptocurrency can be different depending on the design scheme and the main distribution purpose to the user.⁴⁸⁴

Acquiring New Cryptocurrency

Some of more common ways in which newly minted cryptocurrency can be acquired include:⁴⁸⁵

- mining (in a proof of work protocol)
- staking/forging (in a proof of stake protocol)
- initial coin offerings
- airdropping.

Acquiring Existing Cryptocurrencies

Existing cryptocurrencies may be acquired under transactions including the following:⁴⁸⁶

- purchasing cryptocurrency
- receiving cryptocurrency as payment for wages or services
- receiving cryptocurrency in exchange for property
- receiving cryptocurrency as payment for money owed
- receiving cryptocurrency as a rebate when using a debit or credit card
- learn to earn (some crypto exchanges/platforms entice participants to view educational content on their websites by the depositing a token into their account for doing so)
- receiving gifts
- inheritance
- earning cryptocurrency (e.g. a miner or validator)
- transferring cryptocurrency from another person or entity by way of, for example, gift or transfer from a co-owner.

Acquiring or receiving cryptocurrency may occur via methods including the following:

- Centralised Exchanges
- Decentralised Exchanges

484 Capaccioli, *Taxation of Cryptocurrencies* (n 137).

485 Capaccioli, *Taxation of Cryptocurrencies* (n 137) 13.

486 Ric Edelman, *The Truth about Crypto: A Practical, Easy-to-Understand Guide to Bitcoin, Blockchain, NFTs, And Other Digital Assets* (Simon & Schuster, 2022) 257-65 ('*The Truth about Crypto*').

- Over-the-Counter (OTC) brokers.⁴⁸⁷

Holding Cryptocurrency

A crypto asset is held in a virtual crypto wallet which allows for the sending and receiving of cryptocurrency. As explained in Chapter 3 'Wallets', crypto wallets can be online (hot wallet), or offline, via a specially configured USB (cold wallet).⁴⁸⁸

Holders of crypto assets can exploit those assets in various ways to obtain returns. For example, they can stake those assets in a proof-of-stake protocol (such as the Ethereum blockchain) or may use DeFi protocols to earn 'lock-up yields' or returns from liquidity mining or yield farming. They may also be used for bridging or wrapping. Airdrops may also be distributed on the basis of holdings of crypto assets. For further, see Chapter 3 and in particular 'Proof-of-stake' and 'Returns available from holdings of crypto assets'.

Evolution of Cryptocurrency

As explained in Chapter 3, the off-chain governance arrangements in relation to a blockchain network may cause a 'hard fork' in the blockchain, which is caused by a change in the protocol that is not adopted by all nodes. The result of a hard fork is that there are now two blockchains, and the original holders do not lose any of their existing digital coin but instead will get a unit of the new crypto as well.⁴⁸⁹

Disposing of Cryptocurrency

The users of cryptocurrency may dispose of their currency by:

- converting it to fiat currency (usually via an exchange or OTC trading)
- converting it to another crypto asset (usually via an exchange or OTC trading)
- using cryptocurrency as payment for goods and services
- gifting it
- donating it
- burning it or sending it to a 'blackhole' account that non one controls.⁴⁹⁰

The users of cryptocurrency may also effectively lose their cryptocurrency by losing or forgetting their private key, or as a result of theft.

487 Capaccioli, *Taxation of Cryptocurrencies* (n 137) 6.

488 Submission A07, p 10.

489 '[Hard Forks](#)', *Corporate Finance Institute* (Web Page, accessed 15 January 2024).

490 Edelman, *The Truth about Crypto* (n 486) 272–76.

Tax treatment of specific crypto asset transactions

Various submissions suggested that the correct tax treatment of crypto asset transactions is best considered by addressing a series of factual questions about the transaction and its features. Such factual questions may cover issues such as:

- the subjective intention and purpose of the taxpayer at the time of entering into the transaction
- the type of cryptocurrency or digital asset involved in the transaction
- any associated rights, embedded or otherwise, attached to the asset including any rights to a revenue stream
- how the crypto asset was acquired by the taxpayer
- the platform on which the transaction was executed (e.g. via decentralised exchange, centralised exchange, wallet to wallet transaction, or gaming)
- where the platform is operated by a third-party intermediary, the jurisdiction/location of the platform, its role and purpose in the transaction (e.g. issuer, agent, custodian) and any relevant contractual terms
- the volume of transactions (e.g. were the assets acquired in a systematic fashion, volume of transactions, period the assets were held).

In their submission, PwC highlighted some of the factors potentially relevant to determining the correct and appropriate taxation treatment when they noted that there is greater difficulty in determining the appropriate tax treatment of payment, utility and governance tokens over security tokens and NFTs, and further highlighted the need to consider the tax treatment of actions that are outside the holder's control compared with those instituted by the holder.⁴⁹¹

Notably and consistent with PwC's comments, in the Board's view the greater difficulty arises when considering tokens that are entirely 'on-chain' (ordinarily payment, utility and governance tokens which are not associated with 'real world' assets or transactions) because these have features such as decentralisation and pseudo-anonymity that may not be found in more traditional transactions. Accordingly, the Board has focussed on taxation issues associated with these tokens, and predominantly on the foundational cryptocurrency which is native to a blockchain (i.e. a payment token).

Accordingly, set out below is the Board's analysis of the taxation issues arising when consideration is given to specific crypto asset transactions with a focus on cryptocurrencies, based on the lifecycle stages identified in the first section of this chapter: acquiring and receiving crypto assets, holding crypto assets, the evolution crypto assets, and disposing of crypto assets, focussing on cryptocurrencies.

491 Submission A26, 4–14.

Acquiring Crypto Assets

Crypto asset mining (proof of work protocol)

As explained in Chapter 3, a miner is a person or entity that operates a proof of work network to verify and add transactions to a blockchain-based ledger. This mining activity involves processing crypto transactions on the Blockchain (the creation of new blocks on the Blockchain) by miners. As a reward for being the first to solve the problem, the miner receives newly created crypto assets (tokens or coins) and transaction fees. See Chapter 3 for further details.

The following potential events may occur for a taxpayer undertaking crypto asset mining:

- receive by way of reward for being the first to solve the problem:
 - the ‘Block Subsidy’ being newly minted crypto assets
 - transaction fees in the form of existing crypto asset tokens paid by the user to get their transaction included in the blockchain.
- incur costs in relation to undertaking mining activities (such as electricity)
- potentially transfer the crypto assets to a buyer or crypto exchange.

In determining the appropriate tax treatment of mining activities, it is necessary to consider the characterisation of the reward received by the miner. As Cadena Legal stated in its submission to the Review:

There is significant uncertainty as to whether proof of work validation activities should be characterised as the provision of services in exchange of the mining rewards, either to the network as a whole or the parties to the transaction that is being validated, or as the miner creating the rewards through their own efforts This legal characterisation is essential to determining whether ‘received’ mining rewards are income of the miner – rewards for services are clearly income, while the manufacture of an asset does not typically result in the market value of the manufactured asset being included as assessable income.⁴⁹²

The Board notes that the two different components to the miner’s reward (being the newly minted crypto asset and the transaction fees) might add to this uncertainty, with the former arguably more in the nature of a creation by the miner, and the latter a reward in exchange for the provision of services.

ATO guidance

In the explanatory section of its Taxation Determination TD 2014/27,⁴⁹³ the ATO states that ‘Bitcoin held by a taxpayer carrying on a business of mining and selling bitcoin, or a taxpayer carrying on a Bitcoin exchange business will be considered to be trading stock’.⁴⁹⁴

492 Submission A19, 30.

493 TD 2014/27 (n 329).

494 TD 2014/27 (n 329) [14].

More generally, the ATO provides in their web content that ‘if you are carrying on a business in crypto mining, either by yourself or by providing services to a mining pool operator, then the crypto assets you receive from mining are treated as trading stock of your business.’ It further notes that ‘not all crypto miners will be carrying on a business and whether you are depends on your own circumstances’.⁴⁹⁵

While not in any way authoritative (refer to Chapter 6 in relation to ATO guidance), the ATO provides the following response to a question on the ATO Community page:

As a hobby miner, the mining rewards you receive are not assessable income when you receive them. The mining rewards (cryptocurrency) you generate through your hobby mining are CGT assets and you will have a CGT event when you dispose of (or otherwise deal with) your tokens.

The cost base of the cryptocurrency you generate as mining rewards will be zero. The cost of the miner and the electricity to run it are not included in any of the elements of the cost base of the cryptocurrency you generate through your hobby mining.⁴⁹⁶

The Board recognises that the ATO’s guidance is directed towards specific issues raised and so does not comprehensively deal with all aspects of mining, but notes the following issues that might arise for taxpayers who are miners and are seeking to establish their taxation liabilities to the satisfaction of the ATO:

- The web content does not entirely align with the position in TD 2014/27 because it does not identify that for bitcoin to be trading stock, the relevant business must involve the intention of selling or exchanging the bitcoin.⁴⁹⁷ The Board suggests that the website content be amended to align with the position in TD 2014/27.
- The ATO does not provide guidance as to the tax consequences if a miner is carrying on a business, but that business does not involve the intention of selling or exchanging the crypto assets rewarded – such as if a miner intends to hold the bitcoin for investment using DeFi. In these circumstances, is the profit or gain on the disposal of the crypto assets subject to the CGT provisions or could it in some circumstances be characterised as revenue (see Chapter 7 discussion of and references to *Myer Emporium* and associated case law).
- The ATO’s analysis does not appear to deal with the taxation treatment of the receipt by the miners of the transaction fees in the form of existing bitcoin paid into the transaction by users to get their transaction included in the blockchain. The transaction fee component of the mining operation may be more in the nature of a fee for services and therefore income under ordinary concepts. If it is income under ordinary concepts and the newly minted crypto assets are not, then miners would have to distinguish between the tax treatment of their reward by way of newly minted crypto assets, and their reward by way of transaction fees. There must be some question as to whether this would be a practical or appropriate outcome.

495 ‘[Crypto mining](#)’, ATO (Web Page, 18 November 2022).

496 ‘[Claiming electricity and cost of crypto miners as a hobby](#)’, ATO Community (Web Page, accessed 22 January 2024).

497 As set out in Chapter 7, trading stock is defined to include anything ‘produced, manufactured or acquired that is held for the purposes of manufacture, sale or exchange in the ordinary course of a business’: ITAA 1997 para 70-10(1)(a).

The Board considers that further comprehensive guidance for miners is required so that taxpayers who are engaged in crypto mining can understand their full taxation responsibilities as viewed by the ATO. This guidance should also cover:

- deductibility of expenditure incurred by miners
- tax consequences of the disposal of mined crypto assets (which will differ for crypto assets held as trading stock, for crypto assets not held as trading stock but disposed of in the ordinary course of a business or in a one-off commercial transaction, and crypto assets subject to the CGT regime).

The ATO guidance also sets out that miners carrying on an enterprise that is registered or required to be registered for GST, will have GST consequences when mining digital currency:

- If the miner supplies a mining service located in Australia, the miner's supply will be a taxable supply for GST purposes. The miner is required to pay GST on any taxable supplies and may claim GST credits on eligible purchases.
- If the miner supplies the mining services to a non-resident entity who is not located in Australia, the supply of mining services will be GST-free. The miner does not need to pay GST on any GST-free supplies the miner makes. However, the miner may be able to claim GST credits.
- A miner carrying on a business in crypto mining may claim GST credits for purchases related to making taxable or GST-free supplies of mining services.⁴⁹⁸

In Chapter 10, the Board details the complexity facing crypto asset users in determining the location of counterparties to crypto asset transactions. The anonymity of parties to crypto asset transactions may result in compliance challenges for taxpayers seeking to align with the ATO's position.

International comparison

The OECD has examined the issues associated with crypto asset mining and reported that most commonly, countries consider the receipt of a mined unit of virtual currency to be the first taxable event, although a significant proportion of respondent countries indicated that no tax is payable until disposal of the asset, and several countries indicated that the first taxable event may differ depending on whether the mining takes place for business (or habitual) rather than personal (or occasional) purposes.⁴⁹⁹

498 ['Crypto mining'](#), ATO (Web Page, 18 November 2022).

499 OECD, *Taxing Virtual Currencies* (n 6) 24–25.

First event on receipt of new tokens from mining	First event on disposal	Different approaches for business/regular traders & individuals/occasional traders
Andorra	Croatia	Australia
Argentina*	Czech Republic	Canada
Austria**	Denmark	Germany
Cote d'Ivoire	Estonia	Hong Kong (China)
Colombia	France	Netherlands
Croatia	Latvia	Norway
Estonia	Lithuania	Singapore
Finland	Poland	Sweden
Japan	Slovak Republic	Switzerland
Luxembourg**		
New Zealand		
Slovenia		
South Africa		
United Kingdom		
United States		

* Note from Argentina: Tax treatment will depend on a case-to-case analysis.

** Mining is considered to be a commercial activity and therefore taxed on an ongoing basis.

Source: Delegates responses to questionnaire: OECD research.

Recommendation 9.1

The ATO's guidance to cryptocurrency miners predominantly concludes that they receive and hold cryptocurrency as trading stock. This does not appear to deal with the situation where cryptocurrency miners intend to hold the cryptocurrency that they receive, rather than sell it. The ATO's guidance also does not appear to deal with the component of the mining reward attributable to transaction fees, rather than newly-minted cryptocurrency.

The Board recommends that the ATO in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group develop comprehensive guidance as to the tax consequences for cryptocurrency mining activities upon which taxpayers who engage in mining can rely to ensure that their tax disclosures will be acceptable to the ATO.

Crypto asset staking (proof of stake protocol)

As explained in Chapter 3, a staker (also known as a validator or forger) is a person or entity that operates on a proof of stake network to verify and add transactions to a blockchain-based ledger.⁵⁰⁰ Validators 'stake' a certain amount of their cryptocurrency holdings with a certain amount of their stake destroyed (or burned) if they attempt to undermine the system or fail to validate accurately and reliably.

Validators receive by way of reward a share of the cryptocurrency minted with each new block and at every 'epoch' checkpoint for consensus activity, as well as transaction fees based on the 'priority fee' or 'tip fee' which is the optional part of the 'gas fee' that the user pays to have the transaction processed more quickly. See Chapter 3 for further details.

ATO guidance

Assessability of rewards

The ATO's position in relation to proof of stake rewards can be contrasted with that in relation to proof of work. In relation to proof of stake rewards, the ATO advises the following:

As a forger who creates a new block, you'll usually receive a reward in the form of additional tokens from holding the original tokens. The money value of additional tokens is ordinary income at the time you receive the tokens. You need to declare the income in your tax return as other income.⁵⁰¹

The ATO's guidance further notes that 'other consensus mechanisms that reward existing token holders for their role in maintaining the network have the same outcome'.⁵⁰²

However, not all submissions to the Review agreed with this approach. For instance, Tailored Accountants provided the Review with an analysis of staking on the Cardano blockchain and suggested that the new crypto assets awarded to validators are not assessable income, arguing that they cannot be considered to be strictly an income realisation event as there is a dilution of the user's holdings occurring at the same time, due to the new tokens being minted from the reserve.⁵⁰³

Some submissions to the Review also queried the merit of the ATO's distinction between the taxation of rewards to miners in a proof of work protocol (i.e. not assessable and treated as the acquisition of trading stock or a capital asset under the CGT regime), and the taxation of rewards to validators in a proof of stake protocol (i.e. assessable as ordinary income), with a confidential submission to the review explaining:

500 The Board notes the distinction between staking to validate transactions on a blockchain compared to lending or yield rewards. In this section the Board has referred to staking in the context of 'Proof of Stake' activities, unless otherwise specified.

501 '[Staking rewards and airdrops](#)', ATO (Web Page, 29 June 2023).

502 '[Staking rewards and airdrops](#)', ATO (Web Page, 29 June 2023). This statement may confuse miners who already hold some cryptocurrency.

503 Submission A03, 2.

The current ATO guidelines suggest that hobbyist activity from Proof of Work is treated as zero-cost basis, but rewards from Proof of Stake are treated as income, which creates a tax advantage for one consensus mechanism over another. Instead, tax regulation should be technologically neutral.⁵⁰⁴

The Board sees some merit in this argument in favour of consistency and against a tax advantage for one consensus mechanism over another. The Board recognises that there may be a difference in the activities undertaken by a miner in a proof-of-work network (who requires significant hardware) and a staker/validator in a proof-of-stake network (who requires considerably less hardware but must risk a 'stake' of the cryptocurrency that is native to the network). Ultimately, however, there must be some question as to whether this difference in activity is sufficient to establish or justify a different taxation treatment which will create a tax advantage for one consensus mechanism over another.

Issues which do not appear to be covered by ATO guidance

The following issues do not appear to be covered by any ATO guidance:

- When staking activities will amount to carrying on a business as opposed to undertaking activities as a hobby and the consequent application of the general provisions including section 6-5 of the ITAA 1997 ordinary income, the trading stock provisions, and CGT (although the ATO does advise that when the forger or user dispose of crypto assets earned through staking, the forger or user needs to work out if they made a capital gain or loss).⁵⁰⁵
- The tax consequences where rewards received through staking activities are 'locked up' for a period of time, following the token's creation. In these instances, there is a question as to whether the taxpayer is not assessable on the relevant reward until it is available, on the basis that the gain has not 'come home to the taxpayer in a realised or immediately realisable form': *Commissioner of Taxes (SA) v Executor Trustee and Agency Co of South Australia Ltd (1938) 63 CLR 108* (Dixon J). This is an issue upon which guidance would be helpful.
- Whether a disposal and acquisition occurs at the time that the token is staked (i.e. locked-up) and released from staking. In EY's submission to the Review, they noted:

For example, in the case of direct staking, a change in legal ownership may not occur. However, in the case of pool staking or centralised staking, there may be a transfer of legal and potentially beneficial ownership of the tokens. In many cases, a user is unlikely to have sufficient transparency over the terms and conditions of the staking mechanism to be able to determine whether there has been a transfer of legal or beneficial ownership of their cryptocurrency...

Accordingly, we believe it would be appropriate to disregard for tax purposes any change in legal or beneficial ownership of the staked tokens that arises upon locking up the currency, where the staked tokens are subsequently released to the user following the staking process.⁵⁰⁶

504 Submission A34, 6.

505 '[Staking rewards and airdrops](#)', ATO (Web Page, 29 June 2023).

506 Submission A20, 13.

Conclusion

The Board considers that comprehensive ATO guidance is required so that validators on a proof-of-stake network can be confident that their taxation disclosures will be acceptable to the ATO.

Recommendation 9.2

The ATO's guidance to cryptocurrency stakers/validators concludes that the cryptocurrency rewards from staking are received as income on revenue account (being a return on their 'stake'), with the amount assessed equivalent to the value of the cryptocurrency received.

This treatment is different to the treatment of mining rewards, due to the different manner in which staking and mining activities are undertaken.

The Board recommends that the ATO in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group develop comprehensive guidance as to the tax consequences for cryptocurrency staking/validating activities upon which taxpayers who engage in staking/validating can rely to ensure that their tax disclosures will be acceptable to the ATO.

Airdrops

As set out in Chapter 3, an airdrop is 'a distribution of a cryptocurrency or token in a manner that requires no or very little effort from the recipient and involves no exchange of tangible consideration in the form of fiat or other cryptocurrencies.'⁵⁰⁷ An airdrop may be given to a person or organisation because they hold a certain digital asset in their crypto wallet and are being rewarded for holding that asset over a given period of time. Alternatively, a person may receive an airdrop as a reward for being an early participant in, or supporter of, a crypto or blockchain project. Recipients may be required to apply for an airdrop, or crypto tokens may be simply 'dropped' into their wallet.

Current tax treatment

The ATO describes airdrops as follows:

Airdrops are a marketing tool that distribute crypto assets through a group of people to build their use and popularity. Some projects 'airdrop' new tokens to existing token holders as a way of increasing the supply of tokens.⁵⁰⁸

507 Carol R Goforth, 'It's Raining Crypto: The Need for Regulatory Clarification When it Comes to Airdrops' (2019) 15(2) *Indian Journal of Law and Technology* 321, 324; Also Submission A10, 8.

508 '[Airdrops and income tax treatment](#)', ATO (Web Page, 30 June 2023).

In its web guidance, the ATO has set out its position in relation to:

- airdrops of new tokens of an established crypto asset to existing token holders
- initial airdrops as the very first distribution of a crypto project's tokens.

The ATO takes a different approach in relation to the tax treatment of these two types of airdrops. For an established token airdropped to an existing token holder, the ATO advises that the money value of the token is ordinary income at the time it is received and is included in a taxpayer's tax return as other income.⁵⁰⁹

This is contrasted with the position in relation to initial allocation airdrops. The ATO explains that this describes the situation where:

A crypto project may make an initial airdrop of tokens that is the very first distribution of its tokens. These tokens are the initial allocation, if there has been no trading in the project's tokens prior to the airdrop.

The ATO advises that if a token is received in an initial allocation airdrop, a taxpayer will not derive ordinary income or make a capital gain at the time the tokens are received. The ATO further advises that where the tokens in an initial allocation are issued for free they have a zero cost base and have no market value.⁵¹⁰

International comparison

The tax treatment of airdrops varies throughout jurisdictions. In NZ,⁵¹¹ Singapore⁵¹² and the UK⁵¹³ crypto assets received via an airdrop are generally not included in assessable income except where the taxpayer holds the underlying crypto asset on revenue account or provides services to receive the airdropped token. In the United States, State of Arizona airdrops are excluded from taxable income on receipt and the appreciation thereafter is treated as taxable.⁵¹⁴

509 [‘Airdrops and income tax treatment’](#), ATO (Web Page, 30 June 2023).

510 [‘Airdrops and income tax treatment’](#), ATO (Web Page, 30 June 2023).

511 New Zealand Inland Revenue, *Income tax – tax treatment of cryptoassets received from an airdrop (QB 21/06*, 18 June 2021).

512 [‘Income Tax Treatment of Digital Tokens’](#), Inland Revenue Authority of Singapore (IRAS e-Tax Guide, 9 October 2020).

513 [‘CRYPTO21250 – Cryptoassets for individuals: Income Tax: airdrops’](#), HM Revenue & Customs (Web Page, 21 August 2023).

514 In July 2022, the Arizona Governor signed into law H.B. 2204, which specifically excludes the value of airdrops from Arizona state taxable income. It also allows the deduction of gas fees. All that Arizona receives is a tax on any gain in the assets' value after the airdrop. See John Schoenecker, [‘How does Arizona's new crypto law impact taxes on airdrops?’](#) (30 August 2022) *Taxbit Insights newsletter*.

Board's consideration

The Board heard that 'the term 'initial allocation airdrops' is confusing since most airdrops are initial allocations, and that arguably airdrops to established token-holders are akin to staking income or other rewards taxed on a revenue basis.'⁵¹⁵

By contrast, the Board also heard feedback that where a taxpayer receives an airdrop of an established coin because of the taxpayer's existing holding, the airdropped token should be treated in a similar manner to the issue of a bonus share or unit, as set out in section 130-20 of the ITAA 1997.⁵¹⁶ The Board notes that this provision applies specifically to shares in a company or units in a unit trust and essentially apportions the first element of the cost base or reduced cost base of the original holding over both the original shares or units and bonus shares or units, to the extent that it is not taken to be a dividend or included in the taxpayer's assessable income.⁵¹⁷

The Board does not consider that the receipt of an airdropped token is analogous to that of a bonus share that has been paid out of the capital of a company (or equivalent unit trust equity). Unlike a bonus share or unit, it is not apparent that an airdropped token is equity and the Board has heard that there are significant variations in the nature of the events that may be classified as an airdrop. In the absence of any definitional or regulatory consistency in relation to airdrops, the Board considers that it would be inappropriate to recommend legislative reform to extend this provision to airdropped tokens. Accordingly, the Board does not recommend any amendment to the law to extend the application of section 130-20 of the ITAA 1997 to crypto asset airdrops.

In Chapter 3, the Board set out several examples of airdrops, which demonstrated various circumstances under which a token may be airdropped, and agrees with the ATO that under Australia's tax law, different treatment may apply depending on the type and circumstances of the airdrop. The Board considers that the ATO guidance could be more comprehensive to deal with more of the circumstances associated with airdrops. For instance, the ATO guidance only refers to the CGT treatment of initially airdropped coins and does not appear to deal with:

- the tax consequences of the subsequent disposal of crypto assets acquired in an airdrop to existing token holders
- the situation where the underlying tokens are held as part of a crypto asset business, rather than on capital account.

515 Submission A10, 8.

516 Submission A20, 10.

517 The issue of a bonus share or unit would generally not be taken to be a dividend or otherwise assessable where it is paid out of paid-up capital of a company. Under ITAA 1936 s 44 the assessable income of a resident shareholder of a company includes dividends that are paid out of profits derived by it from any source and all non-share dividends paid. An amount debited to the share capital account of a company is excluded from being a dividend under ITAA 1936 sub-s 6(1) (definition of 'dividend') unless it is part of an arrangement under sub-s 6(4).

Recommendation 9.3

The Board does not recommend any legislative change to deal with airdrops, but recommends that the ATO in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group develop further guidance that deals with airdrops in different circumstances, upon which taxpayers can rely to ensure that their tax disclosures will be acceptable to the ATO.

Holding Crypto Assets

There are various ways in which crypto asset holdings might be utilised or transferred which give rise to an issue as to whether there has been a taxing event.

Transactions between wallets

In Chapter 3, the Board set out the operation of wallets, noting that they can be online (hot wallet), or offline, via a specially configured USB (cold wallet). Crypto asset users may transfer their crypto assets between wallets. This raises the question of whether a transfer of crypto assets between wallets triggers a disposal and is a CGT event.

The ATO states on its website that transferring crypto assets from one digital wallet to another digital wallet is not considered as a disposal as long as the user maintains ownership of it.⁵¹⁸ The ATO further states that if the user's 'crypto holding reduces during a transfer to cover a network fee, the transaction fee is a disposal and has capital gain consequences'.⁵¹⁹ The ATO does not consider whether there is any deduction for a network fee.

The Board agrees with the ATO's position that where there is no change in beneficial ownership, no taxing event should occur. The Board considers that this issue is sufficiently clear under the law and appropriately dealt with through the ATO's existing web guidance.

Transfers to exchanges

An increasing number of crypto asset users are choosing to hold their crypto assets through a digital asset platform, such as an exchange. In Chapter 3, the Board detailed the contrast between decentralised and centralised exchanges, noting that the latter will generally take custody of the tokens.

518 ['Crypto asset investments and tax'](#), ATO (Web Page, 4 October 2022).

519 ['Crypto asset investments and tax'](#), ATO (Web Page, 4 October 2022).

The ATO does not currently provide any public advice in relation to the tax treatment of a transfer to an exchange.

An issue is whether a transfer of a crypto asset to a crypto asset exchange constitutes a disposal for the purposes of CGT. The Board considers that the general principle that there should be no disposal if there is no change in beneficial ownership should apply. Relevant to this issue will be the terms of the contract with the exchange. In Appendix B, the Board has set out some general terms that may apply in a user agreement with exchanges. An issue may arise where a centralised exchange does not take beneficial ownership of a crypto asset, but beneficial ownership changes from relating to a specific crypto asset to relating to a pool of crypto assets (such as occurred in *Ruscoe v Cryptopia Limited (in liquidation)* [2020] NZHC 728; [2020] NZLR 809 (Gendall J)). In these circumstances, the reasonable outcome would ordinarily be that there is no change in beneficial ownership and no taxing event for tax purposes.

There was limited feedback in the Board's consultations that crypto participants are particularly seeking guidance in relation to this issue. This is an area for ongoing monitoring by the ATO who could consider providing guidance in relation to this issue should future circumstances warrant this.

DeFi arrangements

In the course of DeFi transactions, crypto assets may be used in various ways including:

- as security by either 'locking' them in the user's wallet or transferring them to a third-party custodian
- depositing them in a 'lending pool' that allows other participants to borrow those assets (potentially receiving governance tokens in respect of assets held in the lending pool)
- funding liquidations
- liquidity mining by depositing crypto assets into an AMM liquidity pool for the purpose of trading
- depositing them in yield-farming pools to maximise returns
- depositing them in a trading pool either via a smart contract protocol or a third-party investment manager including a DAO
- bridging (whether custodial or noncustodial)
- wrapping.

For further details, refer to Chapter 3.

The ATO provides some website guidance in relation to a number of the DeFi transactions listed above under the heading 'Decentralised finance and wrapping crypto'.⁵²⁰

Wrapping and Bridging

The ATO's guidance in relation to wrapped tokens states that when a taxpayer wraps or unwraps a crypto asset, the taxpayer exchanges one crypto asset for another and a CGT event happens, with the capital

520 ['Decentralised finance and wrapping crypto'](#), ATO (Web Page, 9 November 2023).

proceeds for the CGT event equal to the market value of the wrapped token at the time of the exchange. The correctness of the ATO website guidance was not universally accepted in submissions to the Review. In relation to this:

The Members of the Tax Profession stated:

Whilst we agree that in many instances these activities will amount to a disposal, depending on the characteristics of the crypto asset pre and post transfer/wrapping and other factors such as holder, we argue that this is not a blanket proposition for all bridging/wrapping activities.⁵²¹

The Joint Bodies stated that:

A common view is that wrapping should not be treated as a disposal event because the taxpayer's ongoing connection to the wrapped ETH in the wrapped contract can be demonstrated and thus they remain an absolutely entitled beneficiary of a bare trust.⁵²²

Whilst the ATO does not expressly deal with bridging, their description of 'wrapped tokens' suggests that this was used to describe bridging and wrapping arrangements.⁵²³

The Joint Bodies submitted to the Review that ATO guidance was required (or legislative and regulatory change if necessary) on the tax treatment of each kind of bridging event. They noted some bridging events do not involve the trading or exchange of one digital asset for another and that there may be clear and terms and conditions in place to describe the legal relationship with the custodian, however this analysis will place a heavy onus on the taxpayer to analyse a collection of materials and source code to determine the technically correct approach.⁵²⁴

The Members of the Tax Profession considered that the treatment of wrapping and bridging as an acquisition and disposal would disadvantage the blockchain economy compared to the traditional internet businesses that integrate with payments platforms.⁵²⁵

In relation to bridging, Cadena Legal described the economic substance as being more akin to a bailment arrangement under which the token is bailed to the smart contract owner, who then issues a notional asset to represent the user's entitlement to the crypto asset locked in the smart contract. This notional asset does not provide the user with the same rights as the original token had on the original network (that is WBTC cannot be used on the Bitcoin network), however it is effectively a one-to-one representation of an ownership interest in the original token.⁵²⁶

521 Submission A08, 11.

522 Submission A33, 14.

523 See Chapter 3 under 'Wrapping' for an explanation of the different uses of the terms bridging and wrapping.

524 Submission A33, 12.

525 Submission A08, 12.

526 Submission A19, [144].

Recommendation 9.4

The Board considers that there is significant complexity for users in identifying potential changes in legal and beneficial ownership where wrapping and bridging occurs.

At this stage, the Board does not recommend any immediate legislative changes with respect to wrapping and bridging transactions. However, the Board recommends that the ATO provide more detailed guidance, upon which taxpayers can rely to ensure that their taxation disclosures will be acceptable to the ATO, in relation to wrapping and bridging, with particular reference to the specific characteristics that would be identifiable by a taxpayer to determine whether or not a taxing event has occurred.

Number of taxing events

A significant factor for taxation issues where DeFi is concerned is that in many respects DeFi emulates traditional forms of financing which involve money, but because it involves crypto assets rather than money, there will most likely be many more taxing events. For example, those engaging in DeFi may consider depositing crypto assets in a lending pool to be akin to depositing money in a bank. However, there is no taxing event when money is deposited in a bank. By contrast, a deposit of a crypto asset into a lending pool may constitute a disposal of one asset in exchange for another and so trigger a taxing event. The ATO website guidance recognises some of these issues.⁵²⁷ The Board also recognises that these issues arguably offend against Principle 3 ‘Equity and Functional Neutrality’ and Principle 4 ‘Competitive Neutrality’ in Chapter 5 of this Report.⁵²⁸

However, the Board also acknowledges the argument that whilst it may not be immediately apparent to average crypto asset users how the tax law applies and whether a change in beneficial ownership occurs, it is important that persons investing in crypto assets take steps to understand the nature of their investments including the taxation implications, and to ensure that they correctly calculate their taxable income. Reference is made to Chapter 11 regarding record keeping and compliance and the use of technology solutions by third-party service providers in respect of crypto asset transactions.

527 [‘Decentralised finance and wrapping crypto’](#), ATO (Web Page, 9 November 2023).

528 Although in this regard refer to the comments in Chapter 4 under the heading ‘criticisms of digital assets’, which may impact on any assessment as to whether crypto asset transactions are in all senses economically equivalent to traditional finance.

Recommendation 9.5

In light of the complexity and the quickly and continually evolving nature of crypto asset transactions and DeFi in particular, the Board recommends that, at this time, there be no new legislation to establish a new and prescriptive taxation regime to deal with crypto and in particular DeFi transactions (including bridging and wrapping). The Board considers that new legislation at this time would lead to more complexity, potentially more uncertainty, and would put in place a regime that may require continual amendment as the crypto ecosystem develops.

As noted in Recommendation 9.4, the Board recommends that the ATO provide more detailed guidance, upon which taxpayers can rely to ensure that their taxation disclosures will be acceptable to the ATO, in relation to wrapping and bridging. Acknowledging that the Board has heard a number of concerns as to the manner in which the current taxation rules operate, once that guidance is provided, the Board recommends that this issue is reviewed further to confirm that the rules are operating appropriately.

In Chapter 13 to this Report, the Board discusses DeFi further, and recommends that the Government continue to monitor the development and taxation treatment of DeFi transactions.

Evolution of Crypto Assets

Forks

In Chapter 3, the Board described ‘hard forks’ and ‘soft forks’ in a blockchain, noting that a hard fork results in a change in the blockchain protocol to create a new version of the blockchain, whilst some nodes maintain the old version which continues to operate alongside. The users who owned the cryptocurrency will be entitled to the forked cryptocurrency, without doing anything.

A hard fork is also referred to as a ‘chain split’ and the ATO provides website guidance in relation to chain splits.⁵²⁹

ATO website guidance states that where an investor receives a new crypto asset as a result of a chain split, the value of the new crypto asset is not treated as either ordinary income or a capital gain at the time it is received and that the cost base of the new asset that is received as a result of the split is zero (\$0).⁵³⁰

The guidance provides further information in relation to determining which asset is the new crypto asset, advising:

529 [‘Crypto chain splits’](#), ATO (Web Page, 30 June 2023).

530 [‘Crypto chain splits’](#), ATO (Web Page, 30 June 2023).

When a chain split occurs, you need to work out which asset is the new crypto asset. To do this you need to examine the rights and relationships of the crypto assets you now hold.

If one crypto asset has the same rights and relationships as your original crypto asset, it is a continuation of the original asset. Therefore, the other crypto asset you hold because of the chain split will be a new asset.⁵³¹

Additionally, the ATO sets out that the split may cause the original crypto asset to no longer exist, where none of the crypto assets held after the split have the same rights and relationships as the original. It explains that where this occurs, CGT event C2 will occur in relation to the original asset resulting in a capital loss, and that each crypto asset that is held will be treated as a new asset with an acquisition date of the chain split and a nil cost base.⁵³²

The Board received several submissions in relation to ATO guidance. The Joint Bodies suggested that the tax consequences of a fork occurring are unclear⁵³³ and KPMG stated that the current approach of leaving the classification to ordinary principles creates a level of uncertainty for taxpayers⁵³⁴.

The Board notes that stakeholders have highlighted the contrast between the ATO's treatment of fork/chain splits and the treatment of what may be regarded as similar transactions in respect of other assets, such as share splits.⁵³⁵ Several submissions to the Review referenced the potential application of section 112-25 of the ITAA 1997 which provide specific rules that deal with the situation where two assets are essentially created from one asset, which provides for a reasonable apportionment of cost base across the old and new asset. The provision is commonly applied in instances where there is a share split or land subdivision.

The ATO has not:

- made any comment in relation to the application of section 112-25 to forks/chain splits
- explained whether there are any tax consequences of soft forks (in light of their advice in relation to hard forks where the protocol does not continue in precisely the same way)
- given advice as to the consequences of a chain split where the crypto assets are held in carrying on a business (simply noting that the tax treatment may be different)
- explained the legal basis for the positions they have taken.

The Board considers that the ATO position requires further detail in relation to forks, addressing the matters listed above.

531 [‘Crypto chain splits’](#), ATO (Web Page, 30 June 2023).

532 [‘Crypto chain splits’](#), ATO (Web Page, 30 June 2023). The ATO does not address why this consequence does not follow from a soft fork.

533 Submission A33, 17, for example.

534 Submission A30, 10.

535 Submission A26, 20–21.

Recommendation 9.6

The ATO's guidance in relation to chain splits/hard forks do not consider a number of matters including the potential application of section 112-25 of the ITAA 1997, any difference in treatment between chain splits/hard forks and soft forks, or the consequences of a chain split where the taxpayer holds the tokens on revenue account.

The Board recommends that the ATO consider these matters and issue further guidance in relation to the treatment of forks on which taxpayers can rely to ensure their tax disclosures will be acceptable to the ATO.

Disposing of Crypto Assets

A disposal of cryptocurrency will trigger the consideration of whether a taxation event has occurred. The nature of that event will depend on the circumstances in which the taxpayer holds the cryptocurrency. If the cryptocurrency is held in the course of carrying on a business or as part of a one-off profit-making transaction, the disposal may give rise to ordinary income (see Chapter 7 above). If the cryptocurrency is held on capital account, the disposal will most likely give rise to a CGT event. Relevant matters will include the value of any proceeds on disposal, or deemed proceeds on disposal (for example where the market value substitution rule applies to deem the asset disposed of for market value).⁵³⁶

Matters relating to these issues are dealt with in Chapters 7 and 8 of this Report.

536 ITAA 1997 s 116-30.

Chapter 10: Goods and Services Tax

Key Points

- The global nature of crypto asset transactions, and difficulties in identifying the location and/or status of parties to transactions, creates complexity and uncertainty in the application of GST law. Stakeholder feedback is that taxpayers are not able to currently comply.
- Taxpayers need certainty about the nature of crypto asset supplies to enable correct classifications and to manage compliance obligations.
- Immediate action is recommended for the ATO to provide guidance as to evidence that will suffice for taxpayers to meet their obligations.

Introduction

In this chapter, the Board has set out its observations and recommendations in relation to GST issues for crypto assets, and in particular:

- the classification of crypto asset supplies for GST purposes as taxable, GST-free or input-taxed
- the complexity in identifying the location of a customer and how this impacts GST compliance
- the treatment of transactional fees.

Goods and services tax

Background

Since 1 July 2000, most supplies of goods and services in Australia have been subject to a GST of 10% under the *A New Tax System (Goods and Services Tax) Act 1999* (GST Act). The application of GST relies upon a series of key concepts including:

- the carrying on of an enterprise⁵³⁷
- the making of a supply for consideration⁵³⁸
- a connection of the supply to the indirect tax zone (for simplicity referred to as Australia)⁵³⁹
- GST turnover and associated registration requirements⁵⁴⁰
- classification of supplies as taxable, GST-free or input-taxed.

An entity is required to be registered for GST where an enterprise is being carried on and its GST turnover meets the relevant turnover threshold.⁵⁴¹ Where an entity is required to be registered, 10% GST must be charged on any taxable supplies made by that entity, equating to 1/11th of the GST inclusive amount. Where a registered entity acquires goods or services in connection with an enterprise that they are carrying on, they may claim back a credit for the GST paid on the acquisition (input tax credit), provided it does not relate to making input-taxed supplies, subject to various special rules that modify this treatment. The entity will report and remit the net amount of GST payable and input tax credits to the ATO through the Business Activity Statement (BAS) process.

Through the stakeholder consultation process and discussions with the Working Group, the Board has identified a number of challenges that arise in applying these concepts to crypto assets, particularly in relation to:

- the definition of digital currency⁵⁴²
- the classification of supplies of crypto assets as GST-free, taxable or input-taxed
- determining a customer's identity and location
- the resulting impact on GST turnover, requirement to register for GST, and entitlements to input tax credits
- other specific GST issues including the treatment of NFTs, and financial service fees.

537 GST Act s 9-20 defines an enterprise as an activity, or series of activities, done including in the form of a business; or in the form of an adventure or concern in the nature of trade; or on a regular or continuous basis, in the form of a lease, licence or other grant of an interest in property.

538 GST Act s 9-15 defines consideration.

539 GST Act s 195-1 (definition of 'indirect tax zone'): meaning Australia (within the meaning of the ITAA 1997), but does not include the external Territories; an offshore area for the purposes of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*; other than an installation (within the meaning of the *Customs Act 1901*) that is deemed by section 5C of the *Customs Act 1901* to be part of Australia and that is located in an offshore area.

540 GST Act s 195-1 (definition of 'GST turnover'), discussed further at GST Act s 188-100.

541 *A New Tax System (Goods and Services Tax) Regulations 2019* (GST Regulations) regs 23-15.01—23-15.02 currently sets the thresholds at \$150,000 for not profit entities and \$75,000 for other entities.

542 GST Act s 195-1 (definition of 'digital currency').

Classification of supplies

Under the GST Act, the three main categories of supplies are taxable, GST-free and input-taxed.⁵⁴³ This categorisation is relevant for calculating GST turnover, determining whether GST registration is required, identifying if GST is required to be charged, and the extent of any entitlement to input tax credits.

Taxable supplies and GST-free supplies are both included in the calculation of GST turnover for an entity, whereas input-taxed supplies are not. Once an entity's turnover meets a GST turnover threshold⁵⁴⁴, currently set at \$150,000 for non-profit bodies and \$75,000 for other entities, the entity is required to register for GST.

It is important to note that as GST-free supplies are included in an entity's GST turnover, if the relevant turnover threshold is met this may result in a registration obligation even if the entity makes only GST-free supplies and has no GST payment obligations. Failure to register for GST when required can result in an entity being liable for a penalty of 20 statutory units.⁵⁴⁵

This is summarised in the following table:

Type of supply	Included in GST turnover	Requirement to charge GST	Entitlement to associated input tax credits
Taxable	Yes	Yes	Yes
GST-free	Yes	No	Yes
Input-taxed	No	No	No ⁵⁴⁶

Taxable supplies

The starting point for determining GST treatment of a supply is identifying if it meets the requirements of being a taxable supply. An entity makes a taxable supply if the supply meets all of the following criteria:

- made for consideration
- made in the course or furtherance of an enterprise that the entity carries on
- is connected with Australia
- the entity is registered or required to be registered for GST.⁵⁴⁷

543 GST Act s 9-5.

544 As set out in GST Act s 188-10, you have a GST turnover that meets a particular turnover threshold if (a) your current GST turnover is at or above the turnover threshold, and the Commissioner is not satisfied that your projected GST turnover is below the turnover threshold; or (b) your projected GST turnover is at or above the turnover threshold. Current GST turnover includes the supplies you have made in the 12 months ending at the end of the current month (s 188-15) and projected GST turnover includes the supplies you have made in the current month plus the supplies you are likely to make in the next 11 months (s 188-20).

545 *Taxation Administration Act 1953* (TAA 1953) s 288-40 sch 1. The penalty unit rate as of 1 July 2023 was \$313.

546 GST Act div 189 sets out that registered entities making input-taxed financial supplies may be entitled to input tax credits where the financial acquisitions threshold is not exceeded.

547 GST Act s 9-5.

However, it is not a taxable supply to the extent that it is GST-free or input-taxed.

GST-free supplies

The GST Act provides a detailed listing of various supplies that are GST-free. Relevantly, this listing includes exports and some cross border supplies of goods and property, as well as things that are not goods or real property including rights where those supplies are made outside Australia.⁵⁴⁸

Supplies that are GST-free are not subject to GST, however the taxpayer is entitled to claim input tax credits for acquisitions made in connection with those supplies.⁵⁴⁹

To determine the appropriate GST treatment of a transaction, it is necessary for the supplier to determine the location of the recipient of a supply. Where crypto supplies are made to non-residents of Australia, or are not connected to Australia, they will be classified as GST-free including where they would otherwise be input-taxed if made to a resident of Australia. This position is confirmed by the ATO in web guidance as follows:

If you trade digital currency in exchange for money or digital currency with a non-resident who isn't located in Australia, your supply will be GST-free.⁵⁵⁰

The complexity in determining whether a supply of a crypto asset is made to a non-resident is discussed further below.

As noted above, GST-free supplies count towards an entity's GST turnover for the purposes of registration and other obligations under the GST Act.

Input-taxed supplies

Division 40 of the GST Act provides a listing of input-taxed supplies, including financial supplies, residential rent and premises, precious metals, school canteens, certain fundraising events and inbound intangible customer supplies. These supplies or a right to receive such supplies are treated as input-taxed, meaning that the supply is not subject to GST and there is generally no entitlement to receive an input tax credit for things acquired or imported to make that supply.

Input-taxed supplies do not count towards GST turnover for the purposes of registration and other thresholds under the GST Act.

To the extent that a supply is both input-taxed and GST-free, it is treated as GST-free except in limited circumstances.⁵⁵¹

548 GST Act s 38-190.

549 GST Act div 38.

550 '[GST and trading digital currency](#)', ATO (Web Page, 5 July 2023).

551 GST Act sub-s 9-30(3) includes the note that certain choices such as those relating to school canteens and charity fund raising events may result in a different outcome.

As discussed below, most crypto assets will be input-taxed as financial supplies, including those assets meeting the definition of digital currency or assets such as stablecoins that may be categorised as a derivative. NFTs are a notable exception.

Classification of digital currency

GST was one of the earliest areas of Australian taxation law reform for crypto assets. In the former government's March 2016 report 'Backing Australia FinTech' it was recognised that consumers were essentially subject to double tax when using digital currency to acquire anything already subject to GST.⁵⁵² This was due to the consumer being subject to the GST included in the price of an acquisition as well as the potential for GST to be applicable to the supply of the digital currency provided as consideration for the acquisition.

This issue was originally addressed through the ATO's 2014 GST Ruling, *GSTR 2014/3 Goods and Services Tax: the GST implications of transactions involving bitcoin* (GSTR 2014/3).⁵⁵³ This ruling was withdrawn in December 2017 following the introduction of an amendment to the GST Act effective from 1 July 2017 to ensure that sales and purchases of digital currency are not subject to GST.

The amendment introduced a definition of 'digital currency' into the GST Act and relevant provisions were updated to effectively align the GST treatment of supplies of digital currency with that of money.⁵⁵⁴

The effect of this is that a supply of digital currency is not treated as a supply unless it is provided as consideration for another supply of money or digital currency, for example, trading in digital currency. If there is such a supply, it is treated as an input-taxed financial supply.⁵⁵⁵

Most common cryptocurrencies, including bitcoin and ether, will fall within the definition of digital currency, consequently any supply of such assets is input-taxed to the extent it is not a GST-free supply, for example if the supply is not connected with Australia.

The definition of digital currency was updated in June 2023 with an effective start date of 1 July 2021 (2023 amendments)⁵⁵⁶ and includes digital units of value that:

- a) are designed to be fungible; and
- b) can be provided as consideration for a supply; and
- c) are generally available to members of the public without any substantial restrictions on their use as consideration; and

552 The Australian Government, *Backing Australian FinTech* (Full Report, 18 March 2016) 22.

553 Withdrawn by ATO, *Goods and Services tax: the GST implications of transactions involving bitcoin* (GSTR 2014/3W, 18 December 2017).

554 Notably, GST Act sub-ss 9-10(4), 9-85(2) are examples of the alignment of the treatment money and digital currency for GST purposes.

555 GST Act s 195-1 (definition of 'digital currency'). Digital currency is included as a financial supply under GST Regulations reg 40.5.09.

556 *Treasury Laws Amendment (2022 Measures No. 4) Act 2023* sch 2.

- d) either
- i) are not denominated in any country's currency; or
 - ii) are denominated in a currency that is not issued by, or under the authority of, an Australian government agency or a foreign government agency (within the meaning of the *Income Tax Assessment Act 1997*); and
- e) do not have a value that depends on, or is derived from, the value of anything else; and
- f) do not give an entitlement to receive or to direct the supply of, a particular thing or things, unless the entitlement is incidental to:
- i) holding the digital units of value;
 - ii) using the digital units of value as consideration;
- but does not include a thing that, if supplied, would be a financial supply for a reason other than being a supply of:
- g) one or more digital units of value to which paragraphs (a) to (f) apply; or
 - h) money.⁵⁵⁷

The Board notes for completeness that the 2023 amendments were introduced in conjunction with the changes discussed in Chapter 4 in relation to crypto assets not being taxed as foreign currency.

In [GSTR 2002/2](#) *Goods and services tax: GST treatment of financial supplies and related supplies and acquisitions* (GSTR 2002/2), the ATO provides a list of items that it does not consider to be digital currency under the above definition (noting the Ruling was issued prior to the 2023 amendments and last updated in March 2023):

- loyalty points provided by retailers that can only be redeemed for products and services specified by that loyalty scheme
- 'currency' used in online multiplayer games, that cannot be used outside the game under which the 'currency' is made available
- 'digital currency' with value based on something else or that gives an entitlement or privileges to something else. For example, a token that is aligned with an Australian or foreign currency, or gives you an entitlement to use software application services
- NFTs.

The Board has received feedback in consultation submissions that the current definition presents challenges in determining appropriate GST treatment, given that not all crypto assets are captured, leaving uncertainty

557 GST Act s 195-1 (definition of 'digital currency').

and inconsistency. Stakeholders particularly highlighted the need for certainty in relation to the treatment of stablecoins which are excluded under paragraph (e) of the definition of digital currency.⁵⁵⁸

The Board notes that in July 2023, the ATO updated its web guidance confirming that stablecoins are not digital currency and will be input-taxed as a financial supply unless they are GST-free.⁵⁵⁹

This position is also set out in a published edited PBR, where the ATO concludes that a supply of Tether, a stablecoin whose value is derived from the United States dollar, is an input-taxed supply on the basis of it being a derivative.⁵⁶⁰ Derivatives, like digital currencies are classified as input-taxed financial supplies in the GST Regulations.⁵⁶¹

As set out in Chapter 6, the Board notes that edited PBRs are non-binding and further clarification is considered necessary to provide broader taxpayer certainty in relation to the GST treatment.

Recommendation 10.1

The July 2023 update to ATO web guidance confirming the GST treatment of a stablecoin as a derivative is welcome however stakeholder feedback is that greater certainty is needed. The Board recommends that the position is confirmed through an update to GSTR 2002/2 or other binding guidance.

Classification of other crypto asset supplies: NFTs

The ATO has not provided definitive public guidance regarding the categorisation of other specific crypto assets. In relation to NFTs there are no specific GST provisions and the ATO has advised that:

Under the GST rules, an NFT is not a form of digital currency. The GST treatment of an NFT depends on whether your transaction meets the requirements of being either a taxable or GST-free supply.⁵⁶²

and similarly advised:

558 In the submission from the Members of the Tax Profession (Submission A08, 14), it was noted that collateralised stable coins and utility tokens are likely to be excluded from the definition of digital currency, highlighting that ‘these are likely to be characterised as a financial product and create additional burden to taxpayers to understand whether a stable coin supply could be an input-taxed financial supply. Of particular concern is the exclusion of stable coins and law reform has already been recommended to include fully collateralised Australian dollar pegged stablecoins to be treated as money for legal and tax purposes.’. Similarly Tech Council of Australia (Submission A31, 2) recommended that ‘the Board of Taxation clarify that the GST treatment to be provided for bitcoin and digital currency includes other digital stablecoins (such as USDC).’.

559 ‘[GST and digital currency](#)’, ATO (Web Page, 5 July 2023).

560 ATO, *GST consequences of using Tether as payment* (PBR Authorisation Number: 1052000336361, 30 June 2022).

561 GST Regulations item 11 of the table in reg 40-5.09.

562 ‘[Non-fungible tokens](#)’, ATO (Web Page, 30 June 2023).

A non-fungible token (NFT) is not a digital currency because it is unique and can't be interchanged with another NFT. The supply of a NFT is taxable unless it is GST-free.⁵⁶³

As set out in Chapter 3, NFTs are 'representations of unique data. Each token is mathematically unique and unable to be fractionalised, unlike many fungible crypto assets.'⁵⁶⁴ NFTs are commonly used to represent artwork ownership, however as they are merely a data structure there is potential for a wide range of different use cases. The Board has received feedback from consultation submissions that NFTs are complex, have evolved well beyond the recognised forms of NFT art images and operate extensively throughout gaming and other trading functions. Given that NFTs can be taxable for GST purposes their treatment has potential revenue impacts and financial implications for taxpayers. The Board notes that further clarification and guidance is needed in relation to their tax treatment.

The Board notes that the function of NFTs is broad and due to the nature of how they are transacted with, specific GST rules may ultimately be required.

A commonly presented view in relation to the classification of an NFT for GST purposes is that it should be determined by reference to the underlying asset, right or 'thing' from which the token derives its value.⁵⁶⁵ For example, as Vertex noted in their submission, an NFT can just be the support for another service such as a ticket for an event and this should have an impact on the taxation of such an NFT.⁵⁶⁶

However, transactions involving NFTs may not always have a clear link to an underlying asset or service. As PwC highlighted in their submission to the review, where royalty-style payments are embedded into the NFT to allow the original creator of the token to benefit from ongoing sales, the GST treatment is less clear. This is further compounded where it is not possible to identify the parties to subsequent transactions, the location of parties and/or where the smart contract is executed.⁵⁶⁷ In these instances, the receipt to the creator has less direct alignment with the underlying asset and is more in the nature of a royalty payment.

It is apparent that there is no 'one-size fits all' approach that can be applied to determine the GST treatment of supplies of or relating to NFTs. Given the complexity and evolving nature of NFTs further clarification is required to support taxpayers in applying appropriate treatment.

563 ['GST and digital currency'](#), ATO (Web Page, 5 July 2023).

564 The Treasury, *Token Mapping Consultation Paper* (n 4) 55.

565 Submission A30, 5.

566 Submission A11, 4.

567 Submission A26, 27.

Recommendation 10.2

NFTs comprise a broad and diverse group of assets and rights that cannot always be linked to an underlying asset, or that may have royalty-style payments embedded into them. These features create complexity and uncertainty for taxpayers as to their GST responsibilities. It is therefore recommended that the ATO, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop further public guidance to clarify how common types of NFTs (such as artworks, tickets etc) and the associated transactions should be treated for GST purposes.

Recommendation 10.3

Subsequent to Recommendation 10.2 it is recommended that further investigation and work be undertaken as to whether further clarification regarding the treatment of NFTs is needed and if so, how these assets should be categorised for GST purposes.

If clarity and certainty regarding the treatment of NFTs cannot be achieved through further guidance and/or administrative solutions, the Government could consider legislative change if it considers this appropriate, but the Board does not recommend any legislative change at this stage. For further, see Chapter 13 of this Report.

Customer and supplier location

Identification of the location of the parties to a transaction is a critical element of various provisions under the GST law, in particular:

- whether a taxable supply is made and in particular whether a supply has the required connection with Australia
- whether a GST-free supply is made and the flow-on consequences in determining an entity's GST turnover
- the ability of a supplier to issue valid tax invoices.

As explained in Chapter 3, by design, there is a level of anonymity to parties transacting with crypto assets and it is this feature that causes many of the challenges with applying GST law. The Board has considered how the ATO has sought to support taxpayers in applying these provisions and undertaken an analysis of the feedback received in relation to the administrative treatments applied and the limitations of those treatments as a result of legislative constraints.

Connection with the indirect tax zone (Australia)

One of the requisite characteristics of a taxable supply is a connection with the indirect tax zone (for ease of reference, Australia).

A supply of anything other than goods or real property (which would include crypto assets) is considered to be connected with Australia if:

- a) the thing is done in Australia; or
- b) the supply is made through an enterprise that the supplier carries on in Australia; or
- c) all of the following apply:
 - i) neither (a) nor (b) applies in respect of the thing
 - ii) the thing is a right or option to acquire another thing;
 - iii) the supply of the other thing would be connected with Australia; or
- d) the recipient is an Australian consumer.⁵⁶⁸

An entity will generally be able to identify where they are undertaking a transaction and where their enterprise is being carried on. However, it will still be necessary to determine if the supply is connected to Australia and whether the recipient is an Australian consumer. The nature of crypto assets means that it is often not possible to identify the recipient of a transaction and/or where that recipient is located.

The GST Act defines an entity as being an Australian consumer of a supply if it is: an Australian resident; and it is not registered for GST or does not acquire the supply for the purposes of an enterprise it carries on.⁵⁶⁹ The GST Act further sets out the reasonable steps that are required to determine that an entity is not to be treated as an Australian consumer.⁵⁷⁰ This conclusion can be drawn where:

- particular evidentiary requirements have been satisfied
- there is a reasonable belief that the recipient is not an Australian consumer.

GST Ruling [GSTR 2017/1 Goods and services tax: making cross border supplies to Australian consumers](#) (GSTR 2017/1) provides guidance in relation to the steps that a business should take in making this determination. The ruling sets out that it can be founded upon a recipient not satisfying either the residency element or consumer element. The ruling provides a listing of various evidence that the Commissioner will accept supporting a conclusion about a recipient's residency. The Board notes however that this list, which includes information specific to the entity such as their addresses, bank details, phone numbers, origin of correspondence, tracking/geolocation software etc, represents information that is unlikely to be available to the supplier in many crypto asset transactions. In EY's submission, they noted that clarification is required around what constitutes satisfying 'particular evidentiary requirements' as discussed

568 GST Act sub-s 9-25(5).

569 GST Act sub-s 9-25(7).

570 GST Act s 84-100.

in GSTR 2017/1 when the inherent nature of distributed ledger technology means the identity (beyond the users' public key) and residence of a consumer are not able to be obtained.⁵⁷¹

GST-free supplies

As set out above, a supply will be GST-free where (among other things) it is made to a non-resident outside Australia, or is used or enjoyed outside Australia.

ATO web guidance provides that where the counterparty to a transaction cannot be identified, the location of the exchange can be used to identify the counterparty's residence:

If you trade digital currency in exchange for money or digital currency with a non-resident who isn't located in Australia, your supply will be GST-free.

If you trade digital currency through a digital currency exchange and you can't identify the counterparty, you may use the location of the digital currency exchange to treat a supply as GST-free if the exchange is not located in Australia.⁵⁷²

While this may provide some assistance to taxpayers, it does not provide a broad basis for determining the location of a recipient, particularly where transactions are not taking place through an exchange, such as through a direct peer-to-peer arrangement or via a brokerage arrangement. It is also noted that such web guidance is non-binding and hence provides limited taxpayer protection (refer Chapter 6).

The current position is summarised in the following table:

Transaction undertaken	Is the recipient known?	GST treatment of supply
No intermediary (peer-to-peer)	No	Indeterminate (location of recipient unknown)
Transact through Australian exchange	Yes (Australian exchanges subject to KYC ⁵⁷³ protocols)	Input-taxed for Australian recipients GST-free for non-Australian recipients
Transact through foreign exchange	No, but ATO non-binding guidance treats as non-Australian recipient	GST-free
Transact through non-exchange intermediary (e.g. broker)	No	Indeterminate (location of recipient unknown)

571 Submission A20, 8.

572 '[GST and trading digital currency](#)', ATO (Web Page, 5 July 2023).

573 Digital currency exchanges are required to be registered and enrolled with AUSTRAC. A core obligation of this registration is customer identification and verification, i.e. know your customer (KYC) procedures.

GST turnover

In addition to the relevant treatment for GST, determination of the GST-free status of supplies is integral to being able to calculate an entity's GST turnover. GST turnover is used to determine an entity's registration requirements as well as GST reporting regularity, requirements for electronic lodgement and access to simplified accounting methods.⁵⁷⁴

Additionally, in recent years, GST turnover has also been used to determine eligibility for non-GST related measures, for example the COVID-19 JobKeeper stimulus payments.

GST turnover is calculated in relation to a single entity and represents the value of all supplies that are made in connection with an enterprise being carried on during a 12-month period, other than input-taxed supplies and supplies that are not for consideration.

GST turnover may be considered in relation to either:

- **Current GST turnover**

Value of relevant supplies that the entity made or is likely to make during the 12 months ending at the end of that month.⁵⁷⁵

- **Projected GST turnover**

Value of relevant supplies that the entity made or is likely to make during that month and the next 11 months.⁵⁷⁶

For these purposes an entity's turnover will meet a relevant threshold if either of the following apply:

- current GST turnover is at or above the relevant threshold, and the Commissioner is not satisfied that projected turnover is below the relevant threshold
- projected GST turnover is at or above the turnover threshold.

The registration turnover threshold is currently set out in the GST Regulations as \$150,000 for non-profit bodies and \$75,000 for all other entities.⁵⁷⁷

The inability of an entity to determine whether a supply is GST-free or input-taxed, due to the recipient's location being unknown or unable to be confirmed, makes it difficult, if not impossible, for an entity to calculate its GST turnover and therefore to determine its full GST obligations.

In a practical sense, the GST consequences of digital currency being treated as GST-free or input-taxed is largely the same. Under both treatments, no GST is required to be remitted, however the taxpayer making

574 The turnover thresholds are set out in GST Act sub-s 188-10(3) as being the annual apportionment turnover threshold, cash accounting turnover threshold, electronic lodgement turnover threshold, instalment turnover threshold, registration turnover threshold, small enterprise turnover threshold and the tax period turnover threshold.

575 GST Act s 188-15.

576 GST Act s 188-20.

577 GST Regulations regs 23-15.01, 23.15.02.

GST-free supplies may be entitled to input tax credits on acquisitions, whereas the one making input-taxed supplies will generally not be entitled (or be significantly limited) to input tax credits.

The more significant issues arise however as a result of the registration obligations. This creates an issue both from a compliance perspective (i.e. is the entity appropriately registered), and a GST liability perspective, where the taxpayer is making taxable supplies in addition to their digital currency supplies. This can be illustrated in the following scenarios:

Scenario	GST Classification of digital currency supplies	Requirement to register	GST treatment of other supplies
Scenario 1: Enterprise only makes supplies of digital currency to recipients inside Australia: Turnover of digital currency is more than \$75,000	Input-taxed	No (input-taxed supplies do not count towards turnover)	N/A
Scenario 2: Enterprise only makes supplies of digital currency to recipients outside Australia: Turnover of digital currency is more than \$75,000	GST-free	Yes (GST-free supplies will count towards turnover)	N/A
Scenario 3: Enterprise makes supplies of digital currency to recipients inside Australia: Turnover of digital currency is less than \$75,000 Enterprise also makes supplies of other taxable supplies: Turnover of other supplies are less than \$75,000. <i>Total of digital and other supplies total more than \$75,000</i>	Input-taxed	No (only turnover from 'other taxable supplies' will count toward turnover)	No registration requirement therefore not subject to GST
Scenario 4: Enterprise makes supplies of digital currency to recipients outside Australia: Turnover of digital currency is less than \$75,000 Enterprise also makes supplies of other taxable supplies: Turnover of other supplies are less than \$75,000 <i>Total of digital and other supplies total more than \$75,000</i>	GST-free	Yes (GST-free digital currency and other taxable supplies will count towards turnover)	Required to register and subject to GST

Notwithstanding the differing registration obligations in scenarios 1, 2 and 3, the resulting GST liability on supplies will be the same (i.e. no GST will be payable). There will however be differences in the entity's entitlement to input tax credits.

In Scenario 4 however, the treatment of the digital currency as GST-free results in the entity being obliged to register for GST and accordingly the entity will be required to charge GST on its other taxable supplies, whereas it will not in scenario 3.

Tax Invoices

Where an entity makes a taxable supply, it is obliged to provide the recipient with a tax invoice, setting out relevant information. This information will vary depending on the value of the supply being made as follows:

- supply value is less than \$82.50 including GST – no obligation to provide a tax invoice
- supply value is between \$82.50 and \$1,000 including GST – must provide a tax invoice detailing:
 - that the document is intended to be a tax invoice
 - seller's identity
 - seller's Australian Business Number (ABN)
 - date the invoice was issued
 - brief description of items sold, quantity (if applicable) and price
 - GST amount (if any) payable
 - extent to which each sale on the invoice is a taxable sale.
- supply is more than \$1,000 including GST – must provide a tax invoice detailing the above information plus the buyer's identity or ABN.

Therefore, where a taxable supply of a crypto asset is being made for more than \$1,000 it is necessary that the buyer is identified on the invoice and as established above, this information may be unavailable to the seller.

The Board notes that an obligation to issue a valid tax invoice is imposed where it is requested by the recipient of the supply.⁵⁷⁸ In that case the supplier would be in a position to obtain the relevant information from the recipient to enable compliance.

No-ABN withholding

While not specifically a GST issue, taxpayers carrying on an enterprise are subject to obligations in relation to withholding from payments to an entity where that entity does not provide an ABN under section 12-190 of Part 2-5 of Schedule 1 to the TAA 1953. This requirement acts as a compliance measure against entities operating outside of the system, particularly in relation to cash payments to non-GST registered entities.

578 GST Act sub-s 29-70(2).

The obligation arises where an entity (the payer) makes a payment to another entity (the supplier) for a supply the supplier has made in the course of furtherance of an enterprise carried on in Australia by the supplier. Hence, the obligation will not arise where there is no enterprise being carried on by the supplier, or the enterprise is not being carried on in Australia.

There are a number of exemptions to this requirement, including where the supplier provides an ABN, or alternatively where the supply is input-taxed. This input-taxed exemption means that the obligation does not present in relation to transactions involving digital currency.

For transactions involving other crypto assets however, it may be necessary to understand the supplier's location or nature of activities, otherwise the obligation to withhold will arise. The complexity in knowing the location of parties involved in a crypto asset transaction will also cause issues in this space.

Board's consideration

The anonymity of the parties to many crypto asset transactions presents challenges for taxpayer entities in determining a wide range of issues from their obligation to register for GST, through to the appropriate treatment of transactions and compliance with administrative obligations. The feedback from stakeholders is that it is not likely to be possible currently for taxpayers to fully comply with the law.

The Board has considered options to address the potential inability of a taxpayer entity to determine the location of a customer to a transaction. The Board notes that the ATO currently accepts in non-binding guidance that where a transaction is undertaken through an exchange, and the location of the exchange is outside Australia, this will be accepted as evidence to determine GST-free treatment for the transaction.

The Board has also noted that digital currency exchanges, which include individual businesses or organisations that exchange money for digital currency or digital currency for money, are currently subject to obligations through AUSTRAC. These obligations include the requirement to undertake customer identification and verification, which includes the requirement to identify the recipient's address or location. This information will enable the exchange to identify the recipient and consequently enable the appropriate GST classification for Australian resident supplies.

The Board notes however that there are instances where the location of the exchange is not able to be identified and there is a lack of other documentary evidence, particularly for non-resident businesses. The feedback received from stakeholder consultations is clear that an administrative or legislative solution is needed to enable taxpayers to meet compliance obligations.

In its 2010 report to the Assistant Treasurer, 'Application of GST to Cross-Border Transactions', the Board considered the issue of GST registration requirements for non-residents making GST-free supplies.⁵⁷⁹ The Board noted that a non-resident entity making only GST-free supplies connected with Australia of over \$75,000 per annum (\$150,000 for a non-profit entity) would be required to register for GST. In considering the suitability of this, the Board recommended:

579 Board of Taxation, *Review of the Application of GST to Cross-Border Transactions* (Report, February 2010) ('*Review of Cross-Border Transactions*').

Non-residents making only GST-free supplies should not be required to register for GST. However to the extent that the non-resident also makes other supplies that are not GST-free, then the GST-free supplies should count towards the GST registration threshold.⁵⁸⁰

While the Board acknowledges that this recommendation addresses a different issue, it has considered whether the recommendation could be applied to crypto asset transactions, with an expansion of the scope. This could resolve the issue in relation to the inability to identify customer location to determine the appropriate GST treatment and registration obligations, however taxpayers (whether resident in Australia or not) making mixed supplies of digital and non-digital goods and services would still need to identify the appropriate classification of their crypto asset supplies to understand their registration and other obligations.

Taking this into account, the Board's view is that the appropriate outcome under the law is that if a taxpayer is not able to provide evidence that a supply is GST-free, the treatment should administratively default to input-taxed or taxable. Disposals of digital currency and other transactions that would, if connected with Australia, be input-taxed should be treated as input-taxed in circumstances where the location of the recipient cannot be established to be outside of Australia.

As input-taxed supplies do not count towards the registration turnover threshold, this administrative default will remove the requirement for many non-resident taxpayers to register for GST, unless they make significant taxable supplies. The alternative approach (i.e. to default to GST-free treatment) may result in taxpayers being required to register for GST unnecessarily.

Similarly, transactions involving other crypto assets that may be taxable should be treated as taxable as the administrative default.

The Board acknowledges that applying a default treatment may result in some taxpayers who would otherwise be entitled to register for GST and claim input tax credits against GST-free or taxable supplies no longer being entitled to do so. Therefore the Board proposes that the default treatment of input-taxed or taxable will not apply if the taxpayer provides sufficient evidence to substantiate that the supplies are GST-free, with the ATO providing guidance as to what evidence will be sufficient to support this position.

It is preferable for this default treatment to be achieved through an administrative approach that provides binding certainty for taxpayers, rather than legislative change. As global regulation of crypto transactions increases into the future, identifying the location and parties to transactions is likely to become easier. An administrative solution achieves certainty more quickly in the short to medium term. However if an administrative approach is not possible, for example if the ATO view is that the default cannot be applied in the way proposed, legislative change may need to be considered.

580 *Review of Cross-Border Transactions* (n 579) 34.

Recommendation 10.4

The Board has received feedback that taxpayers are not able to currently comply with their obligations under the GST law. The Board considers that a more correct reflection is that taxpayers may not be able to prove that certain supplies are not connected with Australia in order to be GST-free under the law. In such cases, the Board considers the treatment should administratively default to either input-taxed or taxable (depending on the applicable circumstances). If this administrative default applies, the Board considers that taxpayers are able to comply with their obligations under the GST law.

The Board recommends that the ATO consider this matter and in particular the correct outcome if taxpayers cannot prove that supplies are GST-free. If the ATO agrees with the Board's view in relation to the application of an administrative default treatment, the Board recommends that the ATO issue guidance that reflects this outcome.

If this issue is still unresolved after further consideration, the Government could consider legislative change if appropriate, but the Board does not recommend any legislative change at this stage. For further information, see Chapter 13 of this Report.

Other GST issues

The Board has received feedback in relation to other specific GST issues, including the treatment of brokerage and other fees; and the operation of the metaverse and resulting interaction with GST concepts. The Board has provided further consideration in relation to the operation of the metaverse in Chapter 13 of the report.

Brokerage and service fees

The GST treatment of fees relating to crypto asset transactions was highlighted as an issue through the Board's consultation process. Tech Council, Coinbase and Coinstash highlighted the lack of clarity in the GST treatment of fees, specifically:

- Tech Council of Australia noted the need for clarification in relation to fees charged between specific entities for the purchase and sale.⁵⁸¹
- Coinbase highlighted the lack of guidance in relation to the GST treatment of the 'spread' for cryptocurrency transactions, noting that they do not believe that GST is being uniformly collected on the spread.⁵⁸²
- Coinstash noted the need for increased education to international exchanges operating in Australia to create a level playing field in relation to the application of Australian GST legislation.⁵⁸³

581 Submission A31, 2.

582 Submission A12, 2.

583 Submission A41, 4.

The Board notes that in March 2023, the ATO provided an update to its binding ruling, [GSTR 2002/2](#) to incorporate, among other things, references to the GST treatment of digital currency.⁵⁸⁴ This Ruling incorporates Table F which sets out the GST status of various fees as they relate to currency (including digital currency). The Board notes that while there is broader complexity in relation to classification of various fees for financial services, the ATO's update to the GSTR 2002/2 provides greater certainty to crypto assets.

584 Updated by: ATO, Goods and services tax: GST treatment of financial supplies and related supplies and acquisitions (GSTR 2002/2A10, 22 March 2023).

Chapter 11: Record keeping and tax compliance

Key Points

- Complexity in crypto asset transactions and difficulties in sourcing supporting evidence presents challenges for taxpayers and intermediaries.
- Taxpayers need to ensure that the tools that they use to support their tax calculations and disclosures in relation to crypto assets provide accurate data and evidence that is acceptable to the ATO.
- The ATO needs to have access to accurate information to undertake targeted compliance activities in relation to crypto asset businesses and users.

Introduction

This chapter addresses the practical challenges faced by taxpayers, tax agents and the ATO in complying with and administering tax obligations in relation to crypto assets. These challenges have been considered across the following areas:

- record keeping, including the existing legislative requirements and the challenges this presents for crypto asset businesses and users
- crypto asset tax software tools, how they may support taxpayers and tax agents and the resulting challenges
- ATO administration including the use of data matching tools, leveraging income tax return data and compliance activities.

Record keeping for crypto assets

Background

As referenced earlier in this Report, many crypto asset users are from a younger demographic and are often interacting with the tax system for the first time outside of salary and wage income and basic investment

returns. This new or increased engagement with the tax system presents challenges with not only understanding their crypto asset transaction tax reporting obligations, but also in ensuring that sufficient records are retained to support these tax disclosures. As these taxpayers are having their initial interactions with more complex aspects of the tax system, these interactions will be instrumental in establishing ongoing compliance and engagement with the tax system. It is therefore important that, where possible, compliance is simple and information accessible to support this engagement.

Taxpayers may have a general understanding of long-established basic record keeping obligations. For crypto assets however, the Board has consistently heard that there is a large gap in knowledge and availability of sufficient records for substantiating crypto asset transactions.⁵⁸⁵

The rapid evolution of crypto assets over the past decade has left taxpayers attempting to meet their obligations under tax laws that never contemplated the types of transactions that are being undertaken. To date, for example, there have been no specific changes to the record keeping obligations under tax laws to reflect new innovations in the way that transactions are conducted in financial markets, including crypto asset transactions. This was highlighted in EY's submission to the Review:

Where Australian tax laws refer to 'accounting records', legislative references to 'accounting records' may need to be updated to include records of blockchain transactions sourced and provided by an approved [DEX] or third party 'tax calculator' platform.⁵⁸⁶

This complexity in managing record keeping obligations for crypto assets can be attributed to several factors including:

- taxpayer awareness of, and willingness to comply with, their record keeping obligations, which may particularly arise from the crypto user demographic and inexperience interacting with the tax system
- the challenges in applying record keeping provisions that were established for traditional transactions and do not contemplate the specific features of crypto asset transactions
- the inconsistency in availability and completeness of records from crypto asset intermediaries.

In this section the Board will explore these factors and identify ways that these issues may be addressed.

Legal requirements for record keeping

Taxpayers are required to maintain records and statements substantiating how their taxable income has been calculated. Under Australia's system of self-assessment, the general position is that these records are not required to be lodged with the ATO in connection with the income tax return, however they must be retained and made available to the Commissioner upon any ATO inquiry.

585 In submission A10, 14, for example, Koinly noted 'There is limited understanding of what threshold level of information is required to be retained.'

586 Submission A20, 17.

Record keeping compliance is a significant concern for crypto asset users and the intermediaries providing advice to those users. Not only do taxpayers need to maintain records, but in doing so need to understand what in the view of the ATO constitutes sufficient records.

As the regulator of taxpayer record keeping, the ATO may impose a penalty of up to 20 penalty units for failure to maintain suitable records.⁵⁸⁷ Additionally, the processes and systems a taxpayer relies upon to maintain these records are relevant considerations in the Commissioner's determination of any penalties or remissions thereof where a tax shortfall is identified (i.e. the level of reasonable care taken by the taxpayer).⁵⁸⁸

As the Board set out in Chapter 7, current ATO guidance focuses on crypto asset users reporting their crypto asset gains and losses across the following categories:

- Reporting of gains and losses on capital account, through the CGT regime.
- Reporting of gains and losses from carrying on a crypto asset business.

In this section, the Board has considered the legislative record keeping requirements and associated ATO guidance for taxpayers reporting capital gains and taxpayers undertaking business transactions.

CGT record keeping obligations

The CGT provisions establish detailed and specific record keeping requirements for substantiating a gain or loss on a CGT asset and require that these records are generally retained for 5 years after the CGT event occurs.

These records must include information that shows:

- the nature of the act, transaction event or circumstance
- the day when it happened or arose, and
 - in the case of an act – who did it
 - in the case of a transaction, who were the parties to it.
- details (including relevant amounts) of how the act, transaction event or circumstance is relevant to working out whether a capital gain or capital loss has been made from a CGT event.⁵⁸⁹

For the purposes of crypto asset transactions, the ATO has published web content to assist taxpayers in applying these provisions to crypto assets, detailing that crypto asset users must retain:

- receipts for crypto asset purchases, transfers or disposals
- a record of the date of each transaction

587 TAA 1953 sch 1 sub-s 288-25(1).

588 ATO, *Administration of the false or misleading statement penalty – where there is a shortfall amount* (PS LA 2012/5, 2 March 2023) [10F] ('PS LA 2012/5').

589 ITAA 1997 div 121.

- a record of what the transaction is for and who the other party is (this can just be the crypto asset address)
- exchange records
- a record of the value of the crypto asset in Australian dollars at the time of each transaction
- records of agent, accountant and legal costs
- digital wallet records and key
- a record of software costs that relate to managing tax affairs.⁵⁹⁰

This guidance specifically states that these records must be kept in relation to each crypto asset, noting that crypto assets are separate CGT assets. Additionally, the guidance provides tips for keeping good records including various recommendations in relation to exporting transaction history regularly and before account closures, utilising a reputable Australian crypto tax calculator, and using a blockchain explorer or a crypto exchange's customer service where there is a need to recreate records.

Business record keeping obligations

Taxpayers carrying on a business in relation to crypto assets are subject to the same legislative record keeping requirements as all persons carrying on a business. For income tax purposes, a business operator must retain all records that record and explain all transactions and other acts engaged in that are relevant for any purpose of the taxation acts. This includes documents relevant for ascertaining income and expenditure and other documents in relation to elections, choices, estimates, determinations or calculations.⁵⁹¹

The ATO has provided additional binding guidance through Taxation Ruling *TR 96/7 Income tax: record keeping – section 262A – general principles* and non-binding web guidance on Record keeping for business which aims to provide practical instruction to support business operators in their record keeping obligations.⁵⁹²

Similar record keeping obligations are imposed on an entity that is required to be registered for GST, including records that show the income and expenses used to calculate and support the amounts reported and claimed for GST credits.⁵⁹³ In many instances these records will overlap with those required to meet income tax obligations.

In relation to crypto asset business record keeping obligations however, there is limited specific guidance on the ATO website. Instead, the ATO website guidance references the ATO's crypto asset data-matching program and notes the need to keep records of each of crypto asset and all transactions for tax purposes.⁵⁹⁴

590 [‘Keeping crypto records’](#), ATO (Web Page, 30 June 2023).

591 ITAA 1936 s 242A.

592 [‘Record keeping for business’](#), ATO (Web Page, accessed 22 January 2024).

593 TAA 1953 sch 1 s 382-5.

594 [‘Crypto assets used in business’](#), ATO (Web Page, 29 June 2022).

Taxpayers are generally required to retain records for 5 years after a tax return is lodged, although other statutory rules may impose a different period.

Challenges with crypto asset record keeping

Crypto asset transactions are often complex and may occur in high volume across multiple intermediary platforms. Transactions are not limited to straight-forward conversions to fiat currency and include an ever-increasing number of ways through which crypto assets are acquired, created, evolved and disposed, particularly increasing with the growth in DeFi. As a result, taxpayers may be faced with challenges in accessing consistent and appropriate records to support their tax disclosures.

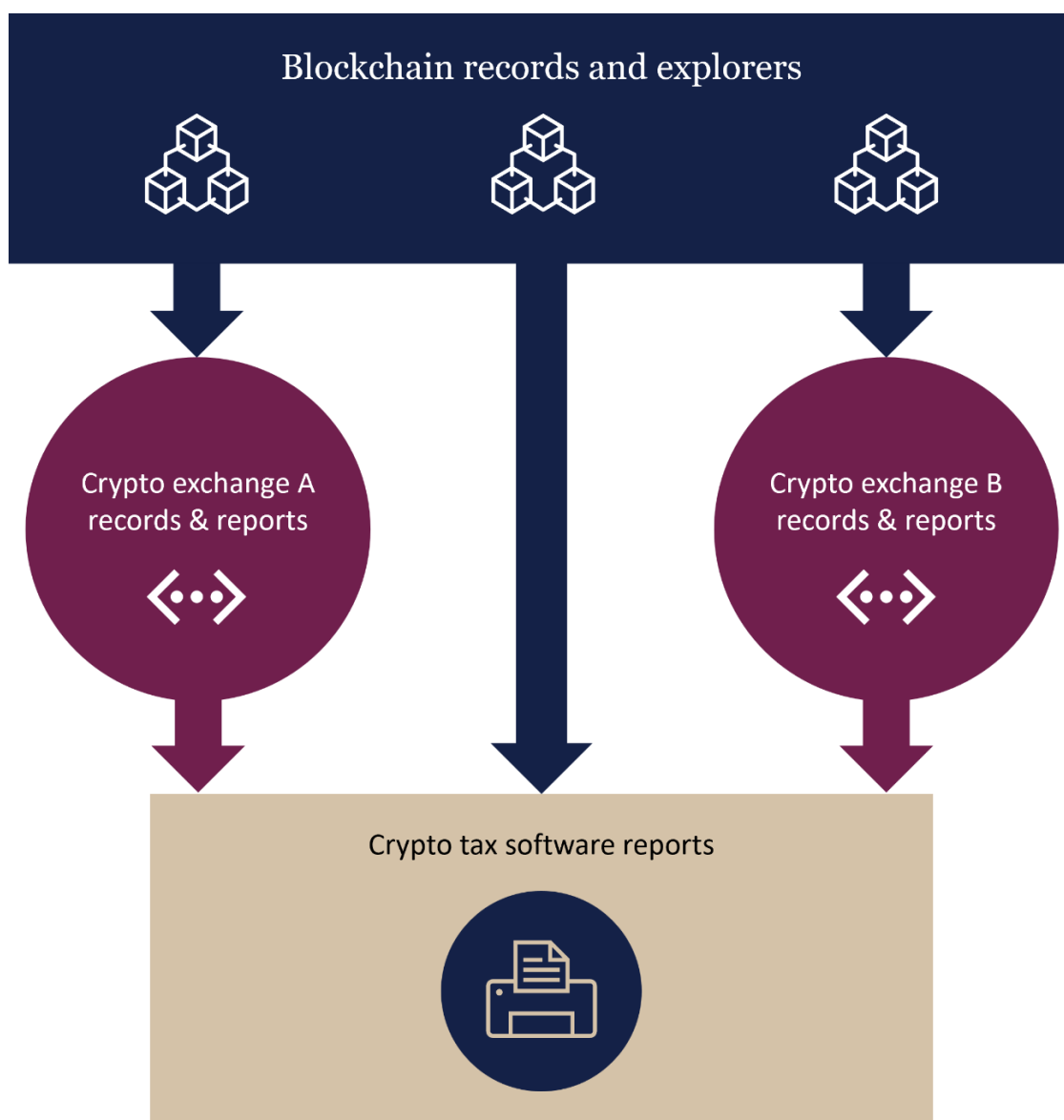
The SMSF Association noted in their submission:

Due to the underlying nature of digital assets, it is difficult to obtain and retain compliant accounting records. The nature of blockchain technology means that transactions are represented by code and are not supported by contemporaneous documentation.⁵⁹⁵

Source of records

Taxpayers may be interacting directly with the blockchain through a wallet and/or through one or more intermediary, such as a crypto exchange. A user may choose to rely upon source data from blockchain records, reports from exchanges, or utilise a crypto tax software tool to consolidate their records and produce reports for tax purposes. These record sources may be used on their own or be brought together, as illustrated in the following diagram:

595 Submission A23, 2.



The Board has considered the complexity that arises with each of the sources of materials below.

Blockchain tools

While a large portion of crypto asset users hold their crypto assets through an intermediary, such as a crypto exchange, many users choose to hold their investments directly through a non-custodial wallet. Some users may make this choice due to the additional level of control over their crypto assets, which has become increasingly relevant in light of collapses of high-profile crypto exchanges, including FTX in late 2022.⁵⁹⁶

596 FTX Exchange was one of the largest centralised cryptocurrency exchanges, filing for bankruptcy in November 2022, with the CEO being convicted of money laundering and fraud in November 2023.

Crypto users who are not investing or transacting through an intermediary may utilise a blockchain explorer tool to identify information on the public blockchain, such as etherscan.io for the Ethereum blockchain or blockchain.com for the Bitcoin network. These tools can provide detailed insights into transactions and can be used to obtain details on specific blockchains and/or wallet addresses, enabling the user to track relevant transaction data, including cost base and transaction fees.⁵⁹⁷ This information will then need to be appropriately categorised, consolidated with other crypto asset transaction data and tax calculations undertaken.

Exchange records

Many crypto asset users hold their crypto investments through an intermediary exchange. While the Board notes that there are a number of significant Australian based exchanges, many Australians also transact with crypto assets through exchanges located in other jurisdictions. This has resulted in a lack of consistency in the information available to users to comply with their tax and record keeping obligations.

In Chapter 10, the Board noted that digital currency exchanges, which include individual businesses or organisations that exchange money for digital currency or digital currency for money, are currently subject to obligations through AUSTRAC. These obligations include the requirement to undertake customer identification and verification, which includes the requirement to identify the recipient's address or location. The purpose of this measure is to identify, mitigate and manage money laundering and terrorism financing risk.⁵⁹⁸ The Board observes that the collection of this information is also an important component of improving transparency for tax compliance purposes and supports the ATO's data matching activities (discussed below).

At the time of the writing of the Report, crypto asset intermediaries are not obliged to comply with any Australian regulations in relation to reporting tax information to users. As explained in Chapter 2, in June 2023 the OECD published its final report on a model Crypto-Asset Reporting Framework (CARF). The CARF provides a framework for automatic exchange of tax-relevant information on crypto assets in a standardised manner.⁵⁹⁹ The CARF sets out the relevant crypto assets in scope and the intermediaries and other service providers that will be subject to reporting.

The CARF consists of rules and commentary that can be transposed into domestic law to collect information from crypto asset service providers, with a relevant nexus to the implementing jurisdiction. On 10 November 2023 a Joint Statement was released by participating countries (including Australia) to work towards swiftly transposing the CARF into domestic law and activating exchange agreements in time for exchanges to commence by 2027, subject to national legislative procedures as applicable.⁶⁰⁰

597 Samara LeMerle, '[How to use a blockchain explorer](#)', *Crypto Tax Calculator* (Web Page, accessed 22 January 2024).

598 '[Customer identification and verification](#)', AUSTRAC (Web Page, 17 January 2024).

599 OECD (2023), *International Standards for Automatic Exchange of Information in Tax Matters: Crypto-Asset Reporting Framework and 2023 update to the Common Reporting Standard*, OECD Publishing, Paris.

600 The Treasury, *Collective engagement to implement the Crypto-Asset Reporting Framework* (Media Release, 10 November 2023).

The Board has heard that taxpayers continue to face challenges in accessing consistent and accurate records in relation to their crypto asset holdings through intermediaries, including the variability in the quality of data exports available from crypto exchanges. The SMSF Association noted:

The only record will be that provided by the trading platform used to facilitate the transaction. What is provided by a trading platform is highly variable with some providing on screen information only via their dedicated app through to downloadable transaction listings in a CSV file format only.⁶⁰¹

Syla, a crypto tax software provider, provided a list of common issues that present in data exports from digital currency exchanges including:

- restrictions on accessing historical transactions
- missing transactions in data exports
- lack of information to identify the nature of transactions (e.g. airdrops being recorded as deposits)
- limited number accuracy and inappropriate rounding issues
- lack of time zones reported on date and time for transactions, creating ambiguity
- absence of supporting information to aid in identifying transactions
- lack of confirmation of any GST collected on the transaction
- absence of components of a transaction such as withdrawal fee or network fee
- presence of redundant data in CSV exports.⁶⁰²

The global nature of crypto asset exchanges means that an Australian-only response to these reporting issues will be insufficient to address the challenges faced by Australian crypto asset holders.

It is noted, however, that taxpayers may choose the exchange that they utilise, and must take some responsibility for ensuring that the exchange is a reputable exchange and provides them with the services (including taxation records) that they require.

601 Submission A23, 2.

602 Submission A09, 4.

Recommendation 11.1

The Board observes that until there is widespread, consistent, and timely implementation of an international standard for crypto-asset reporting, taxpayers will be faced with ongoing challenges in obtaining information in relation to their crypto asset holdings, which may include information relating to required tax disclosures.

It is important that taxpayers understand these issues and the actions that can be taken to minimise the associated risks, both for making tax disclosures and retaining sufficient supporting records. This is particularly relevant for demonstrating to the ATO that reasonable care has been taken in arriving at tax positions, which can be relevant to the level of tax penalties that may arise on resulting tax shortfalls.⁶⁰³

Whilst acknowledging this taxpayer responsibility, the Board also acknowledges the difficulties faced by taxpayers in light of the information challenges in the new and developing crypto ecosystem.

Accordingly, the Board recommends that the ATO consider whether it is possible to, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group, develop guidance for taxpayers that rely upon data from crypto exchanges to determine their tax positions, as to how they might comply with appropriate record keeping requirements including for the purposes of, for example, demonstrating that the taxpayer has acted with reasonable care.

Crypto tax software

An increasing number of crypto tax software programs and tools are available to assist taxpayers in collating crypto asset records from all sources. These tools are generally designed to collate data across a variety of crypto sources and create a tax report to assist in preparation of tax disclosures. The role of software providers has been considered by the Board in the following section.

Role of software providers

Taxpayers are increasingly reliant upon crypto tax calculator software and tools to manage their crypto asset record keeping obligations. As KPMG set out in their submission, these tools integrate both the application programming interfaces from centralised exchanges as well as the on-chain data associated with a taxpayer's public wallet address to aggregate the total transaction history of the taxpayer and produce a tax report based on the assumptions set for the calculations.⁶⁰⁴ The tools are offered as standalone products or as add-ons integrated with existing ledger software tools.

603 PS LA 2012/5 (n 588) [10]; TAA 1953 sch 1 sub-s 284-90(1) item 3.

604 Submission A30, 23.

The volume and complexity of crypto asset transactions makes reliance upon these types of tools extremely important in supporting taxpayers to obtain a complete picture of their crypto asset transactions and maintain sufficient records to support tax disclosures. The critical role of these tools was a common theme throughout submissions to the Review, however stakeholders highlighted they do not provide an automated solution to tax calculations and crypto asset record keeping. The use of this software does not of itself mitigate any risk in relation to tax disclosures and taxpayers need to make choices within the software tools in relation to the tax treatments being applied and bear the full risk in relation to these choices and calculations. In many instances taxpayers may not be 'equipped to review the software to ensure it is producing correct tax outcomes.'⁶⁰⁵

Risks in utilising the software

The Board has been provided with feedback indicating that these software tools can result in significant variations in tax calculations, even where the same source information is input into the tool. Issues raised as part of the Board's consultations include:

- Crypto tax software is generally designed to pick up all on-chain activity, however users may need to undertake a manual entry and reconciliation to incorporate transactions which are taking place off-chain. Where this manual reconciliation is not undertaken, the related transaction will be excluded from any reports produced by the software.
- Unreconciled transactions, or transactions between an included and an excluded source need to be reviewed to determine if they represent disposals, acquisitions or a mere transfer between wallets. Some software products may provide a default or optional treatment for these types of transactions, rather than flagging them for review by the user. This default treatment can result in over or understatement of elements of the transaction. For example, a tool that applies a default treatment for all 'transfers in' as being an acquisition at market value, may result in an overstatement of cost base for an asset.
- Where these assumptions are not explicitly flagged to the user, or the user does not understand the process required to reconcile the transactions and manage exceptions, the resulting tax calculation output will not be correct. Due to the number of choices required with these tools, the Board observes that a significant amount of risk may be assumed by the user (the taxpayer or their intermediate tax agent) in utilising the tool. For example, the accuracy of outputs may be compromised by factors such as the nature of default positions that are taken (including treatment of unreconciled transactions), how users are alerted to unreconciled transactions, the basis of valuation methods used for transactions, and what tax positions form the basis of the methodology used for calculation of tax liabilities (e.g. capital or revenue characterisation of holdings).

Ultimately, and like all accounting software, the quality of output from these tools will be limited by the quality and completeness of the information that the user inputs into the software, as well as the processes and assumptions that the software implements.

605 Submission A27, 28.

The ATO has published Taxation Ruling [TR 2018/2](#) *Income tax: record keeping and access – electronic records* (TR 2018/2) and associated Practice Statement, [PSLA 2008/14](#) *Record keeping when using commercial off the shelf software* (PS LA 2008/14) which sets out what the ATO will accept as ‘sufficient record keeping’ where taxpayers use commercial off the shelf software packages. Currently neither of these provide any guidance specifically in relation to crypto asset record keeping.

Reliance by tax agents

The necessary reliance on crypto tax software has led to increasing uncertainty with the tax agent community in relation to how they may meet their professional obligations in utilising such tools.

Under the TASA 2009 Code (see Chapter 6), tax agents must take reasonable care in ascertaining a client’s state of affairs, to the extent that ascertaining the state of those affairs is relevant to a statement being made or thing being done on behalf of the client.⁶⁰⁶ Tax agents need to consider the information provided to them by their client and consider the veracity of these supporting materials to ensure accurate disclosures are being made.

The Board has heard that guidance and education is required in relation to TASA 2009 Code obligations where tax agents seek to rely upon tax reports generated by digital currency exchanges or third-party ‘tax calculator’ platforms.⁶⁰⁷

Board’s consideration

The Board would expect that its recommendations regarding improvements to the current ATO guidance for taxpayers regarding crypto asset transactions (including being supported by the Crypto Industry Working Group in developing that guidance) should assist software providers in improving the quality of the outputs from crypto asset software products.

Ultimately, however, the Board recognises that it is not the role of the ATO to review, critique or endorse particular software products that apply to crypto assets. In this respect, tax software developed for crypto assets is no different to any other ‘external’ tax compliance tool and that the Commissioner is responsible for administering the tax law, not for administering the transactions that taxpayers choose to enter into, or the means by which taxpayers may seek to comply with their tax obligations.

Whilst recognising the responsibility on taxpayers to keep their tax affairs in order and that they choose the software provider whose services they use, the Board suggests that further consideration be given by the ATO as to how they might be able to assist in improving the useability of outputs from these software products.

606 *Tax Agents Services Act 2009* (TASA 2009) sub-s 30-10(9).

607 Submission A20, 17.

Recommendation 11.2

It is important that taxpayers understand the limitations in any software tools that they are using to substantiate their tax positions, and the associated impact on their meeting their tax obligations. The Board recognises that ultimately, it is the responsibility of taxpayers to comply with the taxation obligations that arise from their activities.

Whilst acknowledging this taxpayer responsibility, the Board also acknowledges the difficulties faced by taxpayers in light of the information challenges in the new and developing crypto ecosystem.

Accordingly, the Board recommends that the ATO consider whether there are any steps that it can take, in consultation with industry stakeholders and taxpayer representative groups including the Crypto Industry Working Group (and including representatives of crypto asset tax software providers), to provide guidance to assist in improving the useability, coverage and outputs associated with crypto tax software.

ATO Administration

Introduction

As set out in Chapter 6, the ATO is responsible for administering the taxation system and in doing so utilises a variety of tools and methods to ensure that integrity in the system is maintained while supporting taxpayer compliance.

In this section the Board has considered the ATO's administration and compliance activities in relation to crypto asset transactions including the use of data matching, tax return disclosures and compliance activities.

Data matching

The ATO utilises data matching from a variety of sources as a key feature of their administration and compliance programs. Information is collected from third-party sources and compiled electronically, validated, analysed and used for a range of education and compliance activities.⁶⁰⁸ The ATO collects information both through its legislated data collection and through other reporting mechanisms, utilising powers to collect information for specific industries, issues or risks. The ATO's information collecting powers include its powers under section 353-10 of Schedule 1 to the *Taxation Administration Act 1953*.

608 [‘Data matching’, ATO \(Web Page, 12 May 2023\)](#).

The ATO has been undertaking a crypto asset data matching program since 2019 and includes data relating back to the 2015 income year. Through the program, the ATO seeks to obtain crypto transaction data to identify buyers and sellers of crypto assets and quantify the related transaction.⁶⁰⁹

The ATO may include a data owner in this program if:

- the data owner or its subsidiary operates a business in Australia that is governed by Australian law
- the data owner provides a crypto asset designated service for individuals or businesses
- the data owner provided these facilities for the years in focus.

Where the client base of a data owner does not present a risk, or the administrative or financial cost of collecting the data exceeds the benefit the data may provide, the data owner may be excluded from the program.⁶¹⁰

Publicly, the ATO advise that the number of individuals affected by this program is expected to range from between 400,000 and 600,000 per year. The data is sourced from providers' systems and the ATO then undertakes further scrutiny and analytics to verify the data. The collected data includes information across identification details (differing for individuals and non-individuals) and crypto transaction details, including broad details about the account, wallet and transactions.⁶¹¹

The Board notes that the ATO currently only collects data in relation where the data owner or its subsidiary operate a business in Australia that is governed by Australian law. Many Australian crypto users will be operating through overseas exchanges that are not governed under Australian law. This means that the information gathered by the ATO will only capture the subset of crypto users operating through the relevant Australian exchanges. The Board notes, however, that the implementation of the CARF over the coming years may provide the ATO with access to higher quality data from the OECD countries that implement the recommendations.

The ATO utilises the above collected information to provide a prompt for taxpayers through the myTax and Online service for agents, where the following alert is made:

You held or disposed of cryptocurrency that may have resulted in a capital gains tax event. Visit tax treatment of cryptocurrencies to learn more about your tax obligations.

Given the apparent lack of awareness in relation to the tax treatment of crypto assets, the Board considers that the use of the prompt for taxpayers who are likely to have undertaken crypto asset activities to consider their reporting obligations is an important initiative by the ATO.

Additionally, the ATO advises that the data obtained through this program is matched with what is reported in a tax return to help identify buyers and sellers of crypto assets and quantify transactions.⁶¹²

609 [‘Crypto assets 2014–15 to 2022–23 data-matching program protocol’](#), ATO (Web Page, 29 June 2022).

610 [‘How we use the data’](#), ATO (Web Page, 29 June 2022).

611 [‘How we use the data’](#), ATO (Web Page, 29 June 2022).

612 [‘About the crypto data-matching program’](#), ATO (Web Page, 29 June 2022).

Many submissions received by the Board have highlighted challenges faced by taxpayers and practitioners in relying upon the information gathered by the ATO.

The Joint Bodies posited the following reason for issues in the matched data:

The ATO's existing data-matching program provides the ATO with a wealth of data regarding dealings conducted through regulated Australian exchanges. However, some members of the Joint Bodies have shared anecdotes that the pre-filled reports generated using the ATO's data do not always tie the correct digital wallets to the correct individuals, with the result that such data should not necessarily be treated as an absolute source of truth. We understand that this issue may be driven in part by the fact that the ATO's data-matching attempts to link digital wallets to individuals by their name, rather than the digital wallet identification numbers.⁶¹³

The Board considers that the use of the data as a prompt for taxpayers is an efficient way to encourage compliance. The consequence of inaccuracies in the data is of lower significance to taxpayers as they are merely being presented a reminder and are not required to respond or directly engage with the ATO.

However, the Board considers that there is a need for a higher level of integrity in the data where it is used for the purpose of raising inquiries with taxpayers asking for disclosures (or the absence of disclosures) to be explained. Taxpayers will incur compliance costs in receiving and responding to these requests, regardless of whether correct disclosures were made in original lodgements or crypto asset transactions were undertaken during the income year.

In KPMG's submission to the review, it was proposed that the ATO look to further utilise data to assist in tax return preparation, noting:

Whilst the program is currently utilised to identify taxpayers who may be failing to meet their registration and lodgement obligations, KPMG considers that the information may also be leveraged to pre-fill tax returns.

Further it may be appropriate to extend this program (possibly on an opt-in basis) to allow taxpayers to utilise data from wallets, exchanges or crypto tax solutions ... to automatically pre-fill tax returns with default assumptions about treatment of relevant transactions to simplify compliance for many taxpayers.⁶¹⁴

The Board is supportive of measures that will simplify the tax disclosure process for individual taxpayers and highlights the need for there to be integrity in any data that is utilised to provide pre-filling information. As highlighted in the previous section, currently the lack of consistency in data available through various sources causes inconsistent outcomes and incorrect disclosures for taxpayers.

613 Submission A33, 27.

614 Submission A30, 22.

Recommendation 11.3

The Board recommends that the ATO consult with industry stakeholders and taxpayer representative groups, the Crypto Industry Working Group and crypto exchanges to identify and implement improvements to the data matching of exchange data, with particular reference to identifying information used for data matching.

Tax return obligations

Australian obligations

As detailed above, individual taxpayers currently receive a notification through myTax and/or Online services for agents where the ATO has matched data indicating that the taxpayer has undertaken crypto asset activity during the income year.

The Board considers that the ATO's use of a prompt is useful to remind and encourage taxpayers that they may have disclosure obligations, however notes that the usefulness is limited due to the notification only being made to those taxpayers who hold crypto assets through an included data provider.

Australian taxpayers are not required to provide any specific information in relation to crypto asset transactions on their income tax returns. Individual taxpayers carrying on a business in relation to crypto assets will need to complete a *Business and professional items schedule* to disclose their relevant business activity. This schedule requires the taxpayer to provide a description of the main business or professional activity that is being undertaken in a free text field. A taxpayer carrying on a crypto asset business would therefore disclose this information in this field.

Individual taxpayers that are reporting capital gains or losses in relation to crypto assets need to complete the relevant item of the *Tax return for individuals (supplementary section)* form (Supplementary return). This does not require the disclosure of the type of asset that has generated the capital gain or loss. The ATO provides a *Capital gain or capital loss worksheet*⁶¹⁵ (worksheet) to support taxpayers in calculating their capital gains. This worksheet is not submitted to the ATO and is provided to help taxpayers calculate the capital gain or loss on their CGT assets. The form provides a listing of 9 asset types or events and does not explicitly make any reference to crypto assets.

Non-individual taxpayers may be required to complete a *Capital gains tax (CGT) schedule* which is submitted to the ATO with the tax return. This schedule requires the taxpayer to provide a breakdown of the source of the capital gain across 10 categories, including the same 9 as the worksheet, plus an additional category for amounts deferred under transitional CGT relief for superannuation funds. An extract from the *Capital gains tax (CGT) schedule 2023*⁶¹⁶ has been provided below:

615 [‘Capital gain or capital loss worksheet’](#), ATO (Web Page, 25 May 2023).

616 [‘Capital gains tax schedule 2023’](#), ATO (Web Page, 25 May 2023).

1 Current year capital gains and capital losses

	Capital gain	Capital loss
Shares in companies listed on an Australian securities exchange	A \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	K \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>
Other shares	B \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	L \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>
Units in unit trusts listed on an Australian securities exchange	C \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	M \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>
Other units	D \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	N \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>
Real estate situated in Australia	E \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	O \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>
Other real estate	F \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	P \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>
Amount of capital gains from a trust (including a managed fund)	G \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
Collectables	H \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	Q \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>
Other CGT assets and any other CGT events	I \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	R \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>
Amount of capital gain previously deferred under transitional CGT relief for superannuation funds	S \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
Total current year capital gains	J \$ <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> , <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	

Add the amounts at labels **K** to **R** and write the total in item 2 label **A** – Total current year capital losses.

International comparison

The Board has explored disclosure requirements in relation to crypto asset transactions as part of its international consultation process with Canada, NZ, Singapore, UK and US. The following disclosures are required in relation to crypto assets for each of these jurisdictions:

- **Canada**

Canada does not currently collect any specific information through the tax return process in relation to crypto asset holdings. Individual income taxpayers that are reporting a capital gain are required to complete a *Schedule 3 Capital Gains (or Losses)*⁶¹⁷ which requires gains or losses to be reported in relation to the specific category of asset. For the 2022 income year, crypto assets are included in a category of ‘Bonds, debentures, promissory notes, crypto-assets, and other similar properties’.

- **New Zealand**

NZ does not currently have any obligation for crypto asset gains to be separately identified on income tax returns, or any taxpayer prompts through the tax portals.

617 Canada Revenue Agency, *Schedule 3: Capital Gains (or Losses)* (Form T1-2022, 2022).

- **United Kingdom**

While the UK does not currently require any separate disclosure in relation to crypto assets on income tax returns, from the 2024–25 tax year, amounts in respect of crypto assets will be required to be separately identified on the income tax form. The Board understands that this will be through the incorporation of a new category of assets on the Capital Gains Tax Summary forms (SA108 for individuals⁶¹⁸ and SA 905⁶¹⁹ for trust or estates).

- **United States**

Completion of the following question is required by all taxpayers on the front page of the Individual income tax return (Form 1040):⁶²⁰

Form **1040** Department of the Treasury—Internal Revenue Service **2023** OMB No. 1545-0074 IRS Use Only—Do not write or staple in this space.

For the year Jan. 1–Dec. 31, 2023, or other tax year beginning _____, 2023, ending _____, 20_____ See separate instructions.

Your first name and middle initial _____ Last name _____ Your social security number _____

If joint return, spouse's first name and middle initial _____ Last name _____ Spouse's social security number _____

Home address (number and street). If you have a P.O. box, see instructions. _____ Apt. no. _____ Presidential Election Campaign
Check here if you, or your spouse if filing jointly, want \$3 to go to this fund. Checking a box below will not change your tax or refund.
 You Spouse

City, town, or post office. If you have a foreign address, also complete spaces below. _____ State _____ ZIP code _____

Foreign country name _____ Foreign province/state/county _____ Foreign postal code _____

Filing Status Single Head of household (HOH)
 Married filing jointly (even if only one had income)
 Married filing separately (MFS) Qualifying surviving spouse (QSS)
If you checked the MFS box, enter the name of your spouse. If you checked the HOH or QSS box, enter the child's name if the qualifying person is a child but not your dependent: _____

Digital Assets At any time during 2023, did you: (a) receive (as a reward, award, or payment for property or services); or (b) sell, exchange, or otherwise dispose of a digital asset (or a financial interest in a digital asset)? (See instructions.) Yes No

Standard Someone can claim: You as a dependent Your spouse as a dependent

Additionally, individual taxpayers that have made a ‘sales and other disposition of capital assets’ are required to complete an additional Form 8949 to support their tax return. In relation to crypto assets, the form requires the taxpayer to detail ‘the full name or an abbreviated symbol of the digital asset and the exact amount of units sold or disposed of in the transaction, and include the sale transaction ID number, if available’ in relation to the transaction.⁶²¹

Board’s consideration

The Board recommends that consideration is given to including a specific crypto asset investment prompt in Australian taxation returns. A requirement for a taxpayer to make express disclosures in relation to crypto assets on the tax return may help the ATO further target its compliance resources. In addition, the Board considers that such a disclosure will play an important role as a prompt for tax agents in asking relevant questions of their clients to understand their crypto asset activities, that may otherwise not be considered.

618 HM Revenue & Customs, *Capital Gains Tax Summary (Form SA108, 2023)*.

619 HM Revenue & Customs, *Trust and Estate Capital Gains (Form SA905, 2023)*.

620 IRS, *U. S. Individual Income Tax Return (Form 1040, 2023)*.

621 IRS, *Sales and Other Disposition of Capital Assets (Form 8949, 2022 Instructions)*.

This approach has been used by the ATO in relation to foreign investments where certain individual taxpayers are required to complete a box answering yes or no to the following question on the Supplementary return:

During the year did you own, or have an interest in, assets located outside Australia which had a total value of AUD\$50,000 or more?

Recommendation 11.4

The Board recommends that consideration be given to including a specific crypto asset investment or transaction related disclosure be added to the individual income tax return, to support compliance and provide a prompt for tax agents and taxpayers to include crypto asset related disclosures in their returns.

Compliance activities

The Board has highlighted feedback throughout the Report about the challenges facing taxpayers seeking to make accurate disclosures in relation to their crypto asset activities. In response, the Board has made various recommendations in relation to the ATO's approach to providing additional guidance and applying penalties where a tax shortfall is identified.

In relation to ATO compliance activities, the Board has heard that there is a need for the ATO provide an educational response to taxpayers where errors are made.⁶²²

Other feedback received by the Board in relation to the targeting of compliance activities highlighted the uncertain basis upon which many taxpayers are making disclosures for income tax and the limited cost-effective avenues that are available to these taxpayers to obtain confidence over their positions.

Observation 11.1

Many taxpayers are seeking to 'do the right thing' when completing their income tax returns, however due to the evolving ecosystem and limited guidance may make errors in disclosures. These taxpayers may benefit from further education as an alternative to penalties at this stage of the development of the crypto ecosystem, whilst recognising that a balance must be struck with the personal responsibility of taxpayers to ensure that they meet their taxation obligations in relation to activities in which they engage.

622 In Submission A08, 5, for example, the Members of the tax profession noted 'the ATO needs to be mindful of their responses to where tax practitioners and taxpayers may ultimately get it "wrong" or where their position is inconsistent with the ATO's interpretation whilst clarity lags. On this point, we highlight our earlier statement that there is an education problem. In this respect, the focus on administration should be educational rather than punitive unless there is evidence of intentional, undesirable behaviour.'

Chapter 12: International Taxation of Digital Assets and Transactions

Key Points

- In the course of the Review, the Board engaged directly with revenue authorities in Canada, NZ, UK, US and Singapore to gain insights on the taxation and revenue administration of digital assets and transactions in those jurisdictions.
- All jurisdictions have provided clear guidance and communications on the tax consequences of crypto transactions and are developing new valuation methods for crypto assets and software tools to assist taxpayers. The Board considers that the ATO is a leader in this area.
- Most jurisdictions are using or exploring third-party information reporting which generally leads to higher levels of taxpayer compliance as well as exploring other options to improve reporting obligations of taxpayers and registrants.
- Some countries have introduced specific tax concessions or regimes in relation to crypto assets and transactions which may have purposes including simplicity of administration and encouraging or discouraging crypto assets and transactions in the jurisdiction.

Introduction

The Board's work in analysing and considering the taxation of digital assets and transactions in comparative jurisdictions comprised three parts:

- First, the Board undertook its own research into the way in which digital assets and transactions are taxed in the comparative jurisdictions of Canada, NZ, Singapore, UK and US.
- Second, the Board asked each comparative jurisdiction a set of 10 relevant questions.
- Third, the Board conducted virtual meetings/consultations with officials from the revenue authorities of Canada, NZ, UK and US on some complex issues.

The international consultations were invaluable in providing the Board with a better insight as to how other jurisdictions are dealing with the complex issues about the tax treatment of digital assets and transactions. The Board is grateful to the officials and authorities for their assistance in the Board's conduct of this part of the Review.

The Board found that despite each of the countries in the key jurisdictions having different taxation systems, there is high degree of similarity of issues. The experiences of authorities in the comparative jurisdictions confirmed that the taxation of digital assets and transactions is a global issue being considered by revenue authorities around the world, and of the need to adopt and use similar taxing and reporting regimes to avoid tax base leakage and fair collection of revenue.

This chapter sets out the results of the Board's work in this area.

Summary of the tax treatment of crypto assets and transactions in Comparable Jurisdictions

The tables below summarise the Board's analysis of the tax treatment of crypto assets and transactions in following comparable jurisdictions: Canada, NZ, Singapore, UK and US. The information was obtained from the Board's research and consultations with the offshore authorities.

Canada

Topic	Explanation
Revenue Authority	The Canada Revenue Agency (CRA) is the federal government body responsible for administering taxes in Canada. The development of tax policy is primarily the responsibility of Canada's Department of Finance.
Current Direct Tax Treatment ⁶²³	<p>To date, there is not any federal direct tax legislation in Canada specific to cryptocurrencies or transactions involving cryptocurrencies. The CRA generally treats cryptocurrency like a commodity for the purposes of their <i>Income Tax Act</i> (Act).</p> <p>Any income from transactions involving cryptocurrency is generally treated as business income or as a capital gain, depending on the circumstances. Similarly, if earnings qualify as business income or as a capital gain then any losses are treated as business losses or capital losses. The Board has provided further information in relation to the indicia considered by the CRA in relation to carrying on a business in Chapter 7.</p> <p>When a taxpayer uses cryptocurrency to pay for goods or services, the CRA treats it as a barter transaction for income tax purposes.</p> <p>For the purposes of reporting business income or capital gains, a disposition refers to the way you get rid of something, such as by giving, selling, transferring it, converting it to fiat or another cryptocurrency, or using it to buy goods and services. In general, possessing or holding a cryptocurrency is not taxable.</p>

623 Regarding income tax (direct tax) considerations, the CRA has provided the definition of the term 'crypto-asset' in Guide T4037.

Topic	Explanation
Current Indirect Tax Treatment ⁶²⁴	<p>Where a taxable property or service is exchanged for cryptocurrency, the GST/Harmonized Sales Tax (HST) that applies to the supply of the property or service is calculated based on the fair market value of the cryptocurrency at the time of the exchange.</p> <p>Canada has enacted two legislative measures targeted expressly at crypto-assets:</p> <ul style="list-style-type: none"> • the Virtual Payment Instrument rules • crypto-asset mining rules. <p>Virtual Payment Instruments</p> <p>As a result of amendments to the Excise Tax Act (ETA) which took effect on 18 May 2019, certain crypto-assets that meet the criteria of a ‘virtual payment instrument’ (VPI) are treated as financial instruments for GST/HST purposes. This includes, for example, bitcoin and other virtual currencies that function as medium of exchange in general, but are not otherwise convertible into a specific good, service or security. This means that when a VPI is sold, purchased, or traded, GST/HST will not apply on the transaction and that certain services relating to VPIs are GST/HST exempt ‘financial services’ as defined under ETA sub-s 123(1).</p> <p>When a crypto asset that does not meet the definition of a VPI (e.g. an NFT, a security token, or a utility token) is sold, purchased, or traded, GST/HST would generally apply to the transaction.</p> <p>Mining</p> <p>In June 2023, Canada enacted rules respecting the application of the GST/HST to mining activities in respect of crypto assets⁶²⁵ and to remuneration received as a consequence of performing a mining activity. The general effect of these rules is that after 4 February 2022 (and subject to certain exceptions):</p> <ul style="list-style-type: none"> • the provision of a mining activity or a mining payment (i.e. a fee, reward or other form of payment that is received or generated as a consequence of the mining activity being performed) is deemed not to be a supply for GST/HST purposes • inputs for crypto asset mining are ineligible for input tax credits.
Guidance & Education	<p>The CRA provides web content guidance in relation to the tax treatment of digital assets including well explained guidance. In particular, the CRA has provided website guidance and education by publishing material such as a ‘Information for crypto-asset users and tax professionals’.⁶²⁶</p>

624 In the context of GST/HST (indirect tax) legislation, the term ‘Cryptoasset’ is defined under ETA 188.2(1).

625 Cryptoasset is defined for this purpose to mean ‘property (other than prescribed property) that is a digital representation of value and that only exists at a digital address of a publicly distributed ledger.’ The definition includes VPIs as well as property that may be excluded from the VPI definition, such as security tokens, utility tokens or NFTs; there is currently no prescribed property for the purpose of the cryptoasset definition.

626 ‘[Information for crypto-asset users and tax professionals](#)’, *Canada Revenue Agency* (Web Page, 12 December 2023) (‘*CRA Information for crypto-asset users and tax professionals*’).

Topic	Explanation
Record Keeping & Valuation	<p>Record keeping</p> <p>If a taxpayer acquires (by mining or otherwise) or disposes of cryptocurrency, the taxpayer has to keep records of the cryptocurrency transactions. This also applies to businesses that accept cryptocurrency as payment for goods and services.</p> <p>The CRA advises taxpayers that they are required to keep adequate books and records to support each crypto asset transaction and provides a list of the relevant records on its website.⁶²⁷</p> <p>Valuation</p> <p>A taxpayer is required to value their cryptocurrencies. This depends on whether they are considered capital property or inventory. When cryptocurrencies are held as capital property, the taxpayer must record and track the adjusted cost base to accurately report any capital gains.</p> <p>If the taxpayer holds more than one type of cryptocurrency in a digital wallet, each type of cryptocurrency is considered to be a separate digital asset and must be valued separately.</p> <p>If the cryptocurrencies are considered to be inventory, one of the following two methods of valuing inventory consistently from year to year is used:</p> <ul style="list-style-type: none"> • value each item in the inventory at its cost when it was acquired or its fair market value at the end of the year, whichever is lower • value the entire inventory at its fair market value at the end of the year. <p>To ascertain the value of a cryptocurrency transaction where a direct value cannot be determined, the taxpayer must use a reasonable method, and keep records to show how the value was determined.</p>
Reporting & Tax Transparency	<p>Information on how to report income or capital gains from crypto-asset transactions can be found in CRA guides:</p> <ul style="list-style-type: none"> • T4037, Capital Gains • T4002, Self-employed Business, Professional, Commission, Farming, and Fishing Income.

Observation points

The Board notes the following from its discussions with the CRA in relation to the taxation administration and treatment of crypto assets and transactions in Canada:

- The CRA may obtain information from a third-party (e.g. an individual or a company) about unnamed persons through the ‘unnamed persons requirements’ (UPR) provisions.⁶²⁸ The CRA can issue a UPR by obtaining authorisation from a judge of the Federal Court and obtain relevant information from a third-

627 CRA Information for crypto-asset users and tax professionals (n 626).

628 Under subsections 231.2(2) and 231.2(3) of the ITA and subsections 289(2) and 289(3) of the Excise Tax Act (Canada).

party. This information is then used to verify if the previously unnamed person(s) correctly reported their income and, where applicable, that the appropriate GST/HST was sent to the CRA. UPRs can be issued to crypto exchanges.

- The CRA advised that they are currently exploring options for enhancing the current tax reporting regime vis-à-vis crypto-asset transactions and holdings, however some of the options under consideration could require new tax legislation and thus support from the Department of Finance Canada.
- The CRA detailed various challenges in collecting the tax in the crypto ecosystem such as:
 - data limitation
 - how quickly crypto assets grow
 - the need for crypto asset reporting obligations.
- The CRA further noted that during course of an audit they face challenges due to:
 - incomplete or inaccurate books and records
 - the ecosystem being made up of multiple entrants and possibly fraudulent taxpayers
 - difficulties in legislative interpretation, due to crypto asset innovation moving so quickly.

New Zealand

Topic	Explanation
Revenue Authority	<p>Inland Revenue (NZ IR) is the federal government body responsible for administering taxes in NZ.</p> <p>The NZ Financial Markets Authority (FMA) regulates NZ's financial markets with one of its statutory duties is to promote and facilitate the development of fair, efficient, and transparent financial markets. It regularly provides public advice and guidance to consumers about investing in crypto assets.⁶²⁹</p>
Current Direct Tax Treatment	<p>NZ IR states that it is necessary to work out the taxpayer's crypto asset income and expenses before the taxpayer can work out their net income (for loss) for their income tax return.⁶³⁰</p> <p>NZ does not have a general CGT. However, income tax legislation specifically includes various forms of gains that would otherwise be considered a capital gain within the definition of 'income'. Further information is provided in Chapter 7 of the Report.</p> <p>The NZ IR website provides a list of activities which may be crypto asset income, including mining, staking, lending, selling or exchanging, or getting paid in crypto assets and notes that these amounts are income in the income year they are received.⁶³¹</p> <p>There are further rules the taxpayer needs to be aware of if their crypto assets are trading stock.</p> <p>In relation to specific transactions, in most cases, crypto assets received from mining (such as transaction fees and block rewards) are taxable.⁶³²</p> <p>If a taxpayer receives new crypto assets from an airdrop, this may be taxable either on receipt, disposal or both subject to the nature of the taxpayer's activities and the circumstances under which the airdropped token is provided.⁶³³</p>

629 ['Cryptocurrencies'](#), *Financial Markets Authority (FMA)* (Web Page, 11 February 2024).

630 ['Working out your cryptoassets income and expenses'](#), *Inland Revenue NZ* (Web Page, 11 February 2024).

631 Trading stock means property that a person, who owns or carries on a business, has for the purpose of selling or exchanging in the ordinary course of the business.

632 ['Mining cryptoassets'](#), *Inland Revenue NZ* (Web Page, 28 April 2021).

633 ['Airdrops'](#), *Inland Revenue NZ* (Web Page, 29 July 2021).

Topic	Explanation
Current Indirect Tax Treatment	<p>Crypto assets (other than NFTs) are excluded from GST. This means buying and selling crypto assets is not subject to GST and there is no requirement to register for GST.</p> <p>If NFTs are created and disposed of, GST is payable where they are sold to someone in NZ. The sale is zero rated if it is sold to someone outside of NZ.</p> <p>GST-registered businesses that raise funds through issuing security token crypto assets (which have features similar to debt or equity securities) can claim input tax credits on their capital-raising costs (e.g. legal fees, exchange listing fees, and costs associated with preparing a whitepaper).</p> <p>The provision of a mining service is a supply for GST purposes, however the supply will be zero rated if the service is provided to a blockchain outside of NZ.⁶³⁴</p> <p>Where an airdrop as a payment for services, GST may be payable.⁶³⁵</p> <p>The <i>Taxation (Annual Rates for 2021–22, GST and Remedial Matters) Act 2022</i> (enacted March 2022) treats the trading of crypto assets as a ‘financial service’ and therefore an exempt supply for the purposes of the <i>Goods and Services Act 1985</i>.</p>
Guidance & Education	<p>The NZ IR provides comprehensive web content guidance in relation to the tax treatment of digital assets including well explained guidance, public rulings and tax return instructions. Its website guidance covers many topics such as:</p> <ul style="list-style-type: none"> • taxing crypto asset income⁶³⁶ • buying and selling crypto assets⁶³⁷ • crypto assets and tax residence.⁶³⁸ <p>Binding formal guidance has been issued on topics including the application of the employee share scheme rules to employer issued crypto-assets provided to an employee.⁶³⁹</p> <p>NZ IR has specific guidance on its website dedicated to crypto assets for businesses. This ensures that these taxpayers have an overall level of awareness regarding their crypto asset tax obligations in NZ.</p>

634 [‘Cryptoassets and GST \(goods and services tax\)’](#), NZ Inland Revenue (Web Page, 30 August 2022).

635 [‘Airdrops’](#), NZ Inland Revenue (Web Page, 29 July 2021).

636 [‘Taxing crypto asset income’](#), NZ Inland Revenue (Web Page, 28 April 2021).

637 [‘Buying and selling cryptoassets’](#), NZ Inland Revenue (Web Page, 30 August 2022).

638 [‘Cryptoassets and tax residence’](#), NZ Inland Revenue (Web Page, 28 April 2021).

639 Inland Revenue, *Income tax – application of the employee share scheme rules to employer issued crypto-assets provided to an employee* (Public Ruling BR Pub 23/07, 15 May 2023).

Topic	Explanation
Record Keeping & Valuation	<p>Record keeping</p> <p>NZ IR provide a list on their website of the crypto asset records that are required to be kept in addition to standard record keeping requirements. This includes records to support the positions taken in a tax return.</p> <p>The guidance notes that taxpayers might use an online crypto assets income tax calculator, and that taxpayers are still required to make sure that transactions are accounted for in accordance with NZ tax law.⁶⁴⁰</p> <p>Valuation</p> <p>NZ IR advises that a consistent method must be used for valuing crypto asset transactions and records must be kept of the valuation method used. It further provides links on its website to two centralised data repository sites and advises that valuations may also be obtained from a reputable public exchange.⁶⁴¹</p>
Reporting & Tax Transparency	<p>NZ IR has used information provided by financial institutions currently subject to reporting requirements to ensure that NZ tax residents are complying with their tax obligations on their foreign investments. It also uses information provided by NZ based exchanges to support its compliance activities.</p> <p>NZ IR noted that the implementation of the CARF will allow increased scrutiny by NZ IR of tax residents' worldwide crypto asset portfolios and compliance with NZ tax obligations.</p>

Observation points

- NZ IR informed the Board that the NZ tax return does not contain a specific question about the holding of crypto assets, and noted that the disclosures are quite generic and that they require the taxpayer to work out their own assessments. They emphasised that NZ IR is cognisant of the OECD Crypto Asset Reporting Framework (CARF) and that the need for a specific question would be considered in the future.
- NZ IR advised that while they do not have a specific CGT, they do have a legislative provision where if a taxpayer purchases a personal property asset for purpose of disposal then the gain is subject to income tax. NZ IR see that crypto assets are a type of personal property that is predominately acquired for purpose of disposal.
- NZ IR mentioned that they have received requests about crypto losses and what that means for tax obligations.
- In relation to data, NZ IR advised that the data they have obtained through data collection does not show as many taxpayers are involved in crypto transactions as compared to what is stated publicly. Some say 15–18% (crypto exchanges), but they do not see that for data they have obtained and in NZ they are aware that a lot of crypto activity outside of NZ, and they are trying to close that gap.

640 [‘Record keeping for cryptoassets’, NZ Inland Revenue \(Web Page, 28 April 2021\).](#)

641 [‘Calculating the New Zealand dollar value of cryptoassets’, Inland Revenue \(Web Page, 7 September 2020\).](#)

Singapore

Topic	Explanation
Revenue Authority	The Inland Revenue Authority of Singapore (IRAS) is the federal government body responsible for administering taxes in Singapore.
Current Direct Tax Treatment	<p>In Singapore, taxation of crypto assets follows general income tax rules and there is no targeted income tax legislation. Singapore's guidance is mainly focused on the income tax treatment of digital tokens, i.e. any cryptographically-secured digital representation of value that can be transferred, stored or traded electronically.</p> <p>There are generally three types of digital tokens – payment⁶⁴², utility⁶⁴³ and security⁶⁴⁴ tokens, and the general tax treatment for transactions involving the use of such tokens are as follows:</p> <p>Payment token: Payment tokens are regarded as intangible property. Consequently, transactions involving the use of payment tokens as payment for goods or services are viewed as barter trade and the value of goods or services transferred should be determined at the point of transaction.</p> <p>Utility token: The use of a utility token to exchange for goods or services is unlikely to create an income subject to tax on the user at the point of exchange. It may, on the other hand, give rise to a deductible expense subject to usual deduction rules.</p> <p>Security token: The taxability of the return derived from a security token depends on the nature of the return, for example, whether it is in the form of interest, dividend or other distributions.</p> <p>Payment tokens may appreciate or depreciate. If a change in fair value of the payment tokens is recognised in the financial statements for accounting purposes, such fair value gain/ loss will not be taxable/ deductible under current tax rules as the gain/ loss is not realised.</p> <p>In addition, there may be situations where the gain/ loss on disposal of payment tokens is taxable, which are acquired over a period at different values/prices, e.g. when the taxpayer is a trader in payment tokens. For the purposes of computing the gain/ loss on disposal, IRAS will accept the First in first out (FIFO) or weighted average cost methods of valuing the payment token disposed.</p>

642 Represents a digital right that can be used or is intended to be used as a means of payment for goods and/or services. Common payment tokens include Bitcoin and Ether.

643 Represents a right to a good or service.

644 Represents a stake or an investment in an underlying asset e.g. shares in company or bonds.

Topic	Explanation
Current Indirect Tax Treatment	<p>Digital payment tokens are tokens that are intended to function as a medium of exchange.⁶⁴⁵</p> <p>With effect from 1 Jan 2020, supplies of digital payment tokens are not subject to GST. Specifically:</p> <ul style="list-style-type: none"> • The use of digital payment tokens as payment for goods or services will no longer give rise to a supply of those tokens. • A supply of digital payment tokens in exchange for fiat currency or other digital payment tokens, and the provision of any loan, advance or credit of digital payment tokens will be exempt from GST. Therefore, the supply of such tokens, being an exempt supply, will not contribute to annual taxable turnover for the determination of the liability for GST registration. <p>The GST treatment for digital tokens / virtual currencies / cryptocurrencies that do not qualify as digital payment tokens are regarded as taxable supplies of services, unless they fall under the prescribed list of exempt financial services. For example, a security token that represents a share in a company or a debt instrument is currently exempt⁶⁴⁶ and thus, is excluded from the definition of digital payment token. Additionally, tokens which are regarded as utility tokens (refer above) will be subject to the same GST treatment as vouchers.⁶⁴⁷</p> <p>In the mining process, there is generally no close nexus between the service provided by the miner to the persons whose transactions are verified, and the mined tokens that the miner received from the blockchain ecosystem (e.g. the block reward). The parties paying the mined tokens are generally also not identifiable. Therefore, the mining of digital payment tokens does not constitute a supply for GST purposes.</p> <p>However, if a miner provides services to an identifiable party or parties, in return for a consideration (e.g. a commission or transaction fee), this constitutes a taxable supply of services.</p> <p>Similarly, services provided by intermediaries remain taxable even if these are in relation to digital payment token transactions.</p>

645 With reference to section 2A of the GST Act (Singapore) digital payment tokens have the following characteristics: (i) it is expressed as a unit; (ii) it is designed to be fungible; (iii) it is not denominated in any currency, and is not pegged by its issuer to any currency; (iv) it can be transferred, stored or traded electronically; and (v) it is, or is intended to be, a medium of exchange accepted by the public, without any substantial restrictions on its uses as consideration. But it does not include: (vi) money; (vii) anything which if supplied, would be an exempt supply under Part I of Fourth Schedule to the GST Act for a reason other than being a supply of a digital token(s) having the characteristics of (i) to (iv); (viii) anything which gives an entitlement to receive or to direct the supply of goods or services from a specific person or persons and ceases to function as a medium of exchange after the entitlement has been used.

646 Under GST Act (Singapore) para 1(e) and 1(f) of Part I of the Fourth Schedule.

647 'IRAS e-Tax Guide GST: Treatment of Vouchers (Fifth Edition), IRAS (Guide, 1 January 2024).

Topic	Explanation
Certain Transactions	<p>For income tax purposes, the taxability of the proceeds of an Initial Coin Offering (ICO, see Chapter 3), in the hands of the token issuer depends on the rights and functions of the tokens issued to the investors. The proceeds from the issuance of payment tokens may be taxable depending on its specific facts and circumstances; while the proceeds from the issuance of utility tokens will generally be regarded as deferred revenue. Proceeds from the issuance of security tokens are akin to proceeds from the issuance of securities or other investment assets/instruments and are thus capital in nature and not taxable.</p> <p>For GST purposes, the issue of tokens in an ICO in return for a consideration (e.g. fiat currency or other digital payment tokens) may be treated as a taxable or exempt supply depending on the characteristics of the tokens issued. For example, if the tokens issued via the ICO qualify as digital payment tokens, the issuance of the tokens via the ICO will be an exempt supply unless it qualifies for zero-rating.</p>
Guidance & Education	The IRAS has structured and succinct e-Tax Guides on: 'Income Tax Treatment of Digital Tokens' ⁶⁴⁸ and 'GST: Digital Payment Tokens' ⁶⁴⁹ .

648 ['IRAS e-Tax Guide Income Tax Treatment of Digital Tokens'](#), IRAS (Guide, 9 October 2020) ('*IRAS Income Tax Guide*').

649 ['IRAS e-Tax Guide GST: Digital Payment Tokens \(Second Edition\)'](#), IRAS (Guide, 3 August 2022).

Topic	Explanation
Record Keeping & Valuation	<p>Record keeping</p> <p>Taxpayers are required to keep proper records of transactions involving crypto assets, according to published guidelines and must furnish additional information and supporting documents to IRAS upon request, for income tax and/or GST purposes. The IRAS provide details of these records in its public guides.⁶⁵⁰</p> <p>Valuation</p> <p>In relation to valuations, the IRAS retains the right to enquire into the valuation method used by taxpayers and taxpayers should be able to substantiate their valuation method with the relevant supporting documentation, however for income tax purposes, IRAS does not prescribe any methodology to value payment tokens. Taxpayers can use an exchange rate that best reflects the value of the tokens received, provided that the following two conditions are satisfied:</p> <ul style="list-style-type: none"> • the exchange rate must be reasonable and verifiable⁶⁵¹ • the methodology used to determine the exchange rate should be consistently applied year on year. <p>When a supplier receives digital payment tokens as consideration for its supply of goods or services, the supplier should report the open market value of the goods or services as the value of its supply in its GST return.</p> <p>On the other hand, in an exchange of digital payment tokens for fiat currency or other digital payment tokens, the supplier may report as the value of supply, either:</p> <ul style="list-style-type: none"> • the realised gain/loss from the exchange. This is similar to the current reporting for exchange of fiat currencies • the proceeds received.

650 IRAS Income Tax Guide (n 648) [12].

651 For example, it is determined using an average of exchange rates available on payment token exchanges, such as Coinbase and Binance. Where the exchange rate is not available on exchanges, taxpayers can use other means to support their claim that the basis of the exchange rate used is reasonable.

Topic	Explanation
Reporting & Tax Transparency	<p>For Income tax purposes, taxpayers must report crypto transactions as required in their income tax returns.</p> <p>For GST purposes, from 1 January 2020:</p> <ul style="list-style-type: none">• A GST-registered customer using digital payment tokens as a means of payment for goods and services will not need to account for GST on its use. This is because the use of digital payment tokens as payments for goods or services will no longer give rise to a supply.• A GST-registered business exchanging digital payment tokens for fiat currency or other digital payment tokens will have to report an exempt supply in their GST return (unless the supply qualifies for zero-rating).• A GST-registered business providing a loan, advance or credit of digital payment tokens will have to report an exempt supply in their GST return (unless the supply qualifies for zero-rating).• A GST-registered intermediary facilitating transactions of digital payment tokens on behalf of customers in return for a fee will be considered as providing a taxable supply of services (i.e. standard-rated unless the supply qualifies for zero-rating).

United Kingdom

Topic	Explanation
Revenue Authority	HM Revenue & Customs (HMRC) is the federal government body responsible for administering taxes in the UK.
Current Direct Tax Treatment	<p>Generally, UK HMRC considers that individuals hold crypto assets as a personal investment, usually for capital appreciation or to make particular purchases, and so will be liable to pay CGT on any gains when they dispose of their crypto assets. However, if the individual is acquiring and disposing crypto assets as part of a trade (such as where they are trading in crypto assets), their trading profits will be taxable, and income tax rules would take priority over the CGT rules.</p> <p>If a company or business is carrying out activities which involves crypto, they may be liable to pay tax.</p> <p>If a taxpayer's activities amount to a trade, the receipts and expenses will form part of the calculation of the individual or company's trading profit.</p> <p>Individuals will be liable to pay Income Tax and National Insurance Contributions on crypto assets which they receive from their employer as a form of non-cash payment or from mining, transaction confirmation or airdrops.</p> <p>HMRC does not consider the buying and selling of crypto assets to be the same as gambling.⁶⁵²</p>

652 The term 'gambling' is not defined and whether a transaction can be characterised as betting or gambling is a question of fact.

Topic	Explanation
Current Indirect Tax Treatment & Other Taxes	<p>For Value Added Tax (VAT) purposes, exchange tokens⁶⁵³ received by miners for their exchange token mining activities will generally be outside the scope of VAT on the basis that the activity does not constitute an economic activity for VAT purposes. This is because there is an insufficient link between any services provided and any consideration; and there is no customer for the mining service.</p> <p>When exchange tokens are exchanged for goods and services, no VAT will be due on the supply of the token itself.⁶⁵⁴</p> <p>In 2014, HMRC decided that under Item 1, Group 5, Schedule 9 of the <i>Value Added Tax Act 1994</i>, the financial services supplied by bitcoin exchanges – exchanging bitcoin for legal tender and vice versa – are exempt from VAT.⁶⁵⁵</p> <p>For the transfers of exchange tokens to fall within the scope of Stamp Duty or Stamp Duty Reserve Tax, they would need to meet the definition of ‘stock or marketable securities’ or ‘chargeable securities’ respectively.</p> <p>Crypto assets are considered to be property for the purposes of Inheritance Tax.</p> <p>A Digital Services Tax (DST) is a 2% tax paid by groups on the revenues that are generated from UK users of certain digital activities. ‘Online marketplace’ service is one of the three digital services activities defined for the purposes of DST. HMRC considers that an exchange which has a purpose of facilitating the sale of tokens and, in fulfilling that purpose, enables users to sell tokens to other users, will be an online marketplace. It should be noted that the sale need not be concluded on or through the exchange, merely that the exchange enables the sale to take place, or the exchange advertises or otherwise offers the tokens for sale. There is an exemption from DST for online financial marketplace. However, it is unlikely that crypto asset exchanges can benefit from the exemption.</p>
Guidance & Education	<p>HMRC has issued comprehensive guidance on its website detailing the tax treatment for individuals and businesses in relation crypto assets. The guidance has received a significant number of views.</p>

653 Exchange tokens are tokens that are intended to be used as a means of payment, for example bitcoin, see ‘CRYPTO10100 – Introduction to cryptoassets: what are crypto assets’, HMRC (Web Page, 21 August 2023).

654 ‘CRYPTO45000 – Cryptoassets for businesses: Value Added Tax (VAT)’, HMRC (Web Page, 21 August 2023).

655 This was confirmed in the Court of Justice of the EU (CJEU) in the Swedish case, *David Hedqvist* (C-264/14). The CJEU referred to the judgment in *First National Bank of Chicago* (C-172/96) and concluded that the exchange of traditional currencies for non-legal tender such as Bitcoin (and vice versa) are financial transactions and fall within the exemption under Article 135(1)(e) of the *VAT Directive*.

Topic	Explanation
Record Keeping & Valuation	<p>Record keeping</p> <p>HMRC sets out the different records required to kept in relation to each crypto asset transaction and note that the onus is on the individual or business to keep their own records for each crypto asset transaction.</p> <p>Records should include: the type of crypto asset, date of the transaction, if they were bought or sold, number of units involved, value of the transaction in pound sterling (as at the date of the transaction), cumulative total of the investment units held, and bank statements and wallet addresses.⁶⁵⁶ HMRC notes that records may include cold wallets (paper or USB), hot wallets, downloads from crypto asset exchanges.</p> <p>Valuation</p> <p>HMRC notes that many crypto assets (such as bitcoin) are traded on exchanges which do not use pound sterling, so the value of any gain or loss must typically be converted into pound sterling on their tax return. Reasonable care should be taken to arrive at an appropriate valuation for the transaction using a consistent methodology. Details of the valuation methodology should be kept.⁶⁵⁷</p>
Reporting & Tax Transparency	The amount of tax for which an individual or a business is liable must be reported annually to HMRC on either a self-assessment tax return (for individuals), or a company tax return (for companies).

Observation points

- HMRC advised that following an independent survey, commissioned by HMRC and conducted by an external commercial company, about dealing in crypto assets, the survey results revealed:
 - around 10% of UK adult population have held or do hold crypto assets
 - noting that the HMRC had published detailed guidance on crypto assets, only 28% of respondents had seen the guidance; and only about half of the respondents said they understand CGT, the main applicable tax.
- HMRC mentioned that they had sent out educational letters and have done some general communications to raise awareness about the taxation of crypto assets. Additionally, there are some pending changes to the self-assessment tax return form to include a specific section on crypto assets. The intended timeline for changes is the Self-Assessment return for 2024–25 tax year. The two forms that will change are the SA108 and SA905.
- HMRC noted that for tax purposes, it is not only the nature of the asset that matters, but also the facts and circumstances around transactions that has an important role; and that for individuals, HMRC sees most activities are for investment purposes, which means they will be holding the crypto assets and that a disposal will be potentially subject to CGT.

656 [‘CRYPTO10400 – Introduction to cryptoassets: record keeping’](#), *HM Revenue & Customs* (Web Page, 21 August 2023).

657 [‘CRYPTO23000 – Cryptoassets for individuals: valuation’](#), *HM Revenue & Customs* (Web Page, 21 August 2023).

United States

Topic	Explanation
Revenue Authority	In the US, taxation is imposed at each level of government: federal, state and local. The Internal Revenue Service (IRS) is the federal enforcement authority in the US with the authority to enforce the tax laws applicable to crypto activity.
Current Direct Tax Treatment	<p>The sale or disposition of crypto assets is subject to direct taxation (income tax or CGT).</p> <p>The IRS website provides a broad list of transactions which may result in a tax liability including:</p> <ul style="list-style-type: none"> • sale of a digital asset • exchange of digital assets for property, goods or services • exchange or trade of one digital asset for another • receipt of a digital asset as payment for goods or services • receipt of a new digital asset as a result of mining and staking activities • receipt of a digital asset as a result of an air drop use of digital assets to pay for goods or services • any other disposition of a financial interest in a digital asset • receipt or transfer of a digital asset for free (without providing any consideration) that does not qualify as bona fide gift.⁶⁵⁸
Current Indirect Tax Treatment	<p>Indirect tax (sales tax) is imposed by most states since there is no general sales tax. Approximately 30 states tax digital goods and services. Clarification notices have been issued by some states (e.g. Pennsylvania, Minnesota and Washington) that sales of certain digital assets are subject to sales tax, bringing with it marketplace and out of state seller rules.⁶⁵⁹</p>
The Responsible Financial Innovation Act	<p>The <i>Responsible Financial Innovation Act</i> (RFIA) was introduced into the US Senate on 7 June 2022, proposing amendments to the <i>Internal Revenue Code of 1986</i> (IRC) in relation to the responsible taxation of digital assets. Under the RFIA, the following proposed amendments to the IRC include:</p> <ul style="list-style-type: none"> • The amount of gain or loss that is excluded from gross income with respect to a sale or exchange shall not exceed \$200. • Classify a decentralised autonomous organisation (DAO), such that by default it is a business entity. • The adoption of guidance in relation to various digital asset transactions including in relation to mining, staking, forks, airdrops, and payments and receipts of digital assets by merchants, charitable contributions and characterisation of payment stablecoins as indebtedness. • The Comptroller General of the US to conduct a study and provide a report in relation to various issues relating to retirement investing in digital assets.

658 [‘Digital Assets’](#), IRS (Web Page, 29 September 2023).

659 Submission A11, 2.

Topic	Explanation
Certain Transactions	<p>Virtual currency received as a bona fide gift, is not recognised as income until it is sold, exchanged, or otherwise disposed of. Charitable organisations that receive virtual currency treat the donation as a non-cash contribution.</p> <p>Virtual currency donated to a charitable organisation will not result in income, gain, or loss to the donor. However, the donor can receive a charitable contribution deduction for the fair market value of the virtual currency at the date and time of the donation, provided the donor complies with the other requirements for non-cash contributions under 26 U.S.C. § 170.</p>
Guidance & Education	<p>At the federal level, a number of agencies have been proactive in regulating and educating the public about the nature and effect of transactions involving crypto assets. The IRS has issued guidance regarding the taxation of crypto assets. There are other agencies that are involved with issuing guidance/rules regarding crypto assets and crypto asset transactions, such as the Securities and Exchange Commission (SEC), Treasury’s Financial Crimes Enforcement Network (FinCEN), and the Commodity Futures Trading Commission (CFTC).</p> <p>The IRS provides web content guidance in relation to the tax treatment of digital assets including general guidance, public notices, frequently asked questions and tax return instructions. Formal guidance has been issued in the form of IRS Notice 2014–21⁶⁶⁰ providing general crypto guidance.</p> <p>Additionally, Revenue Rulings have been issued in relation to hard forks and airdrops⁶⁶¹, regarding additional units of cryptocurrency received from staking⁶⁶² and IRS Notices on the treatment of certain NFTs as collectibles⁶⁶³, and advising that other countries’ recognition of cryptocurrency as legal tender does not change the treatment of that currency for US tax purposes⁶⁶⁴.</p>

660 IRS, *Virtual Currency Guidelines* ([Notice 2014-21](#), accessed 27 January 2024).

661 IRS, *Gross income* ([Revenue Ruling 2019–24](#), 9 October 2019).

662 IRS, *Gross Income* ([Revenue Ruling 2023–14](#), 31 July 2023).

663 IRS, *Treatment of certain nonfungible tokens as collectibles* ([Notice 2023–27](#), 21 March 2023).

664 IRS, *Internal Revenue Bulletin* ([Notice 2023–34](#), 21 August 2023).

Topic	Explanation
Record Keeping & Valuation	<p>Record keeping</p> <p>The IRS and regulations require taxpayers to maintain records that are sufficient to establish the positions taken on tax returns. IRS guidance advises that crypto asset users should maintain, for example, records documenting receipts, sales, exchanges, or other dispositions of virtual currency and the fair market value of the virtual currency.</p> <p>Valuation</p> <p>The fair market value of the virtual currency must be used in determining gains or losses from virtual currency. Where the cryptocurrency is not traded on any cryptocurrency exchange and does not have a published value, the fair market value is equal to the fair market value of any property or services exchanged for the cryptocurrency when the transaction occurs.</p>
Reporting & Tax Transparency	<p>Congress passed the <i>Infrastructure Investment and Jobs Act</i> in November 2021, which, once implementing regulations are finalised, will require brokers to report certain information regarding their customers' crypto transactions. As part of these reforms, it has been reported that the IRS is developing a new tax form for brokers to capture individual annual crypto activity subject to taxation.</p> <p>It is also anticipated that the IRS will publish rules which would bring holders of crypto assets into the scope of <i>Foreign Account Tax Compliance Act 2010 (US)</i> (FATCA) tax reporting in line with US Treasury proposals.⁶⁶⁵</p> <p>FATCA applies to foreign financial institutions while crypto information reporting will apply to US brokers.</p> <p>The US Individual Income Tax Return Form 1040 contains a box for the individual to indicate whether they engaged in certain digital asset transactions. This has been discussed further in Chapter 11.</p>

Observation points

- The IRS advised that there is a question on the individual tax return (IRS Form 1040) which asks if they have received or engaged in any transactions involving digital assets during the year, and that question has been on the return since 2019. They have noted an increase in the number of people who are responding to that question, however the number of responses that indicate yes, is much lower than what is expected based on the number of people who have crypto transactions. The question only appears on the individual tax return form, so they are unable to gauge the response for non-individual taxpayers.
- As is the case with the ATO, the IRS has received feedback asking for more guidance in multiple areas. The US IRS has issued both formal and informal guidance in an effort to provide the public as quickly as possible with helpful information. Informal guidance procedures allow for the issuance of more rapid guidance where appropriate (e.g. where rules are needed in an emerging area or issue).

665 Submission A38, 5.

- The IRS said that what determines the need for guidance include issues that arise during the audit processes, discussions with industry groups, and feedback from the public generally.
- The IRS advised that in relation to obtaining information/data, they can get information from exchange platforms, but it is often not given voluntarily. The IRS may obtain the information through issuance of summonses on exchanges and other relevant entities and persons. After that information is secured, the IRS can use the information for appropriate enforcement activities, including sending out 'education' letters to notify taxpayers of how certain crypto transactions should be reported as well as any reporting obligations. In addition to securing relevant data through administrative actions, most data will come from a mandatory reporting regime, which will not be effective until sometime after implementing regulations have been finalised.
- The IRS stated they are using both tracing and computational tools to gather and analyse data.

Board's analysis of responses to questions

The Board has set out below its analysis of the responses by the five comparable jurisdictions to the set of ten questions that the Board sent to each of them on 4 November 2022. The details of the responses of each jurisdiction are contained in Appendix D.

1. Do entities which carry on a business in relation to crypto assets or accept crypto assets as a form of payment, have a comprehensive awareness of the current (jurisdiction's) tax treatment of crypto assets and their tax obligations?

Most jurisdictions cannot gauge what the level of understanding of the taxation of crypto assets by business entities.

2. Are investors aware of the current (jurisdiction's) tax treatment of crypto assets? To what extent are they receiving professional tax advice?

All jurisdictions have published clear guidance and communications on the tax consequences of crypto transactions.

UK HMRC have conducted research on individuals holding crypto assets indicating that 42% of crypto owners are aware that tax liabilities can arise when purchasing goods/services using crypto.

3. How should the tax transparency of crypto assets be improved, including what information tax administrators need to know about transactions for purposes of compliance and enforcement?

The US IRS noted that the use of third-party information reporting generally leads to higher levels of taxpayer compliance as it is transparent to both the administrator and taxpayers.

Most jurisdictions provide guidance in relation to record keeping requirements for taxpayers (such as the IRAS e-Tax guide).

Several jurisdictions noted they are exploring options to improve reporting obligations of taxpayers and registrants.

Once implemented, the information that will be gathered under the OECD's Crypto Asset Reporting Framework (CARF) requirements will support transparency.

The US currently requires a specific crypto asset disclosure on an individual tax return. The UK Government announced in the Spring Budget on 15 March 2023 that a new section will be introduced to the self-assessment forms from 2024/2025 tax year so that gains from crypto assets will be identified separately on the forms. These disclosures act as a prompt for taxpayers and support compliance and are discussed further in Chapter 11.

4. What data sources does the jurisdiction's revenue agency currently utilise to assist in compliance activities in relation to crypto transactions?

The CRA relies on a number of tools and numerous internal and external data sources to detect crypto asset activity and is used with other submitted data to determine a taxpayer's overall compliance profile.

The NZ IR requests crypto asset data from the NZ-based exchanges/brokers and is in the process of refreshing these information requests. This data is used to identify customers that are not compliant with their taxation obligations.

IRAS currently relies mainly on publicly available information and information available to the US Government to identify taxpayers that may have derived taxable crypto transaction gains/profits.

UK HMRC advise that Schedule 23 of the *UK Finance Act 2011* can be utilised to gather bulk information from crypto asset service providers.

The US IRS widely uses various data sources in general compliance activities which are applied to crypto asset compliance, including: federal, state and local interagency intelligence; information sharing with tax treaty partners; whistle-blowers and informants; Suspicious Activity Reports; and voluntary third-party reporting information.

5. Are there intermediaries (such as exchanges) or data sources that play a role in the revenue agency's administration of the jurisdiction's taxation laws?

Most jurisdictions (including CRA, NZ IR and the US IRS) detailed processes and plans to obtain information from intermediaries, such as crypto asset exchanges within their own jurisdictions.

The IRAS detailed the requirements upon licensed digital payment token service providers to collect and keep their users' identification and transaction records and submit them to authorities when requested (regulated by the Monetary Authority of Singapore).

6. What channels and tools does the revenue agency use to engage with the crypto community and their advisers to build awareness in relation to taxation obligations?

The CRA uses public opinion research, conferences, other direct engagements with the tax community and industry groups, web guidance and social media accounts.

NZ IR has regular conversations with the crypto asset exchanges which supports development of website guidance and helps the NZ IR in understanding innovation.

IRAS carries out broad-based educational efforts by providing an e-tax guide and write-up on IRAS' website.

UK HMRC has a range of mechanisms such as: messages to tax agents/advisors and other communications campaigns; educational nudge letters; and working group and industry roundtables.

The US IRS uses the website, press releases/communication notices, attends speaking engagements, and presents at national tax conferences on digital asset issues.

7. What additional support can be provided to the tax adviser community to assist them in advising their clients in relation to the tax treatment of crypto assets?

It was widely agreed that the expansion of information reporting for digital assets also benefits taxpayers and tax advisers.

The CRA noted that taxpayers and tax professionals can seek clarity on the application of the Income Tax Act and its Regulations to transactions involving crypto assets through the Income Tax Rulings Directorate (GST/HST Rulings Directorate for GST/HST issues) or obtain a binding ruling for a fee.

NZ IR has been involved in joint training sessions with Chartered Accountants Australia and New Zealand in respect of the taxation of crypto assets.

IRAS-Tax Agent Relationship Framework to support closer partnership and collaboration between tax agents and IRAS and partners with the Singapore Chartered Tax Professionals to improve industry standards, such as through regular dialogue sessions with tax advisers to discuss tax policies and issues.

UK HMRC undertake the following: engage with working groups through roundtables regularly; publish detailed guidance on the GOV.UK website and operate a non-statutory clearance service where taxpayers and their advisors could seek formal written advice.

8. What have been the greatest challenges for the revenue agency in relation to the taxation of crypto assets and their associated transactions?

The CRA advised that the factors that create tax compliance risks include pseudonymity of transactions, decentralised and borderless nature of crypto assets, borderless nature of crypto assets, and pace of innovation.

The NZ IR noted that from a policy perspective the greatest challenges have been uncertainty as to how existing categories of law apply to crypto assets, the lack of visibility over incomes derived through crypto assets, and compliance costs faced by taxpayers.

IRAS advised that one of the biggest challenges is understanding the developments in the industry in a timely matter and ensuring that tax treatments are regularly reviewed and updated.

UK HMRC's main concerns and drivers at this time centred around knowledge and data.

The US IRS noted a significant challenge as being that the distributed ledger record of transactions does not include the identity of the parties involved in the transactions.

9. What steps have been or can be taken to address these challenges?

Information reporting regimes and data acquisition from third parties were noted as being critical in supporting tax compliance by helping to close the information gap with respect to digital assets.

At the international level, the Board heard that guidance on proposed definitions, recommended tax treatment of the different classes of crypto assets and how the belonging status of customers⁶⁶⁶ can be accurately determined for crypto transactions, these would be helpful references.

NZ IR noted that compliance costs could be reduced through the introduction of simpler calculation methods or supporting greater use of software tools (subject to resourcing and government priorities).

Some jurisdictions highlighted the goal of making it easier for taxpayer to comply with their obligation and harder to evade tax through improved compliance related data and upskilling staff to be more confident in recognising and dealing with crypto asset related tax challenges.

10. What aspects of taxing crypto assets have been managed successfully by the Revenue agency and the jurisdiction's Federal Government, and are there any particular features of the jurisdiction's tax system or its administration which have been particularly beneficial in relation to the taxation of crypto assets and their associated transactions?

The CRA advised that the use of third-party requirements and exchange of information has been beneficial to the CRA in identifying potential non-compliant taxpayers and in understanding of the tax gap in the crypto asset space.

The NZ IR described its targeted approach, including identifying a group of top crypto assets users/investors to use as a control group to understand crypto asset compliance and the flow-on effects of intervention on the wider crypto asset ecosystem.

⁶⁶⁶ Belonging status is a term used under the Singaporean GST legislation and determines whether a taxpayer is treated as 'belonging' in Singapore. In general terms, it relies upon the existence of business establishments (BE) or fixed establishments (FE) in Singapore; place of residence; and where there are BEs/FEs both in and outside of Singapore, the one that is most directly concerned with supply services or where services are most directly used.

The IRAS advised that changes made from January 2020 simplified the tax treatment and reduced the compliance burden for digital payment tokens with no GST to be collected on their sale/use as payment.

UK HMRC noted that there is still work to be done in administering the taxation of crypto assets, however they highlighted successes and active pieces of work such as that publication of market research into the crypto asset industry.

The US IRS advised that they have seen an increase in the numbers of individuals who are checking the box on the front of the Form 1040, indicating their crypto asset activities, but noted that the level of compliance of those who are not checking the box, and whether they have digital asset reportable transactions, is not currently known.

Some of the key themes from the above comparative analysis include:

- All jurisdictions are facing similar challenges in relation to tax compliance for crypto asset transactions.
- All jurisdictions have provided clear guidance and communications on the tax consequences of crypto transactions and are developing new valuation methods for crypto assets and software tools to assist taxpayers.
- Most jurisdictions are using third-party information reporting which generally leads to higher levels of taxpayer compliance as well as exploring other options to improve reporting obligations of taxpayers and registrants. The Board has provided further information in relation to the ATO's work in this area in Chapter 11.

Other Jurisdictions' Tax Regimes

While the Board directly engaged with the jurisdictions detailed above, it notes that the taxation of crypto assets is a matter that is addressed throughout taxing regimes across the world. Throughout the course of the Review the Board has identified various crypto asset specific tax measures in other jurisdictions.

Some jurisdictions have contemplated or have introduced specific tax regimes and tax concessions ('tax expenditures')⁶⁶⁷ for crypto assets and transactions. These can have various purposes, including simplicity and ease of administration for low value amounts, or to attract or discourage crypto assets and transactions to the jurisdiction. Some of these measures are outlined in the following table:

667 A tax expenditure arises where the tax treatment of a class of taxpayer or an activity differs from the standard tax treatment (tax benchmark) that would otherwise apply. Tax expenditures can include tax exemptions, some deductions, rebates and offsets, concessional or higher tax rates applying to a specific class of taxpayers, and deferrals of tax liability. Commonwealth of Australia, *Tax Expenditures and Insights Statement* (Statement, February 2023) 2.

Jurisdiction	Tax Regime/Expenditure
Belarus	Tax free exemptions for companies and individuals legally working with crypto. ⁶⁶⁸
Germany	Crypto assets sold by investors are tax exempt if held more for than one year or if under EUR 600 pa. ⁶⁶⁹
India	A new taxation regime for income relating to Virtual Digital Assets – 30% with no deduction or loss offset. ⁶⁷⁰
Italy	Previously only levied tax on cryptocurrency where the portfolio value was over approximately €51,000, however following the 2023 budget capital gains tax is now payable on any crypto asset gains over €2,000. ⁶⁷¹
Portugal	Capital gains on crypto are effectively exempt from tax. ⁶⁷²
United Kingdom	The UK Law Commission had proposed a category of property ‘data objects’ that meet certain criteria. This approach may enable a new CGT event or CGT asset category if applied in Australia along with realisation events outside of debt / equity rules, foreign currency & CGT regimes.
United States	<i>Responsible Financial Innovation Act</i> aims to establish tax free concept below certain threshold (refer analysis in previous section).

In addition, it is noted that low or no tax jurisdictions have been popular for early decentralised projects.

Observation 12.1

The Board observes that the various themes from the above comparative analysis is directed at educating, assisting and providing simpler and easier compliance for the user of crypto assets and transactions.

The Board notes that some countries have introduced tax regimes and concessions for crypto assets and transactions.

668 Lubomir Tassev, ‘[Tax Benefits for Bitcoin Businesses in Belarus Extended Until 2025](#)’, *Bitcoin.com* (Web Page, 1 April 2023).

669 As referenced in Submission A10, 18; A25, 3; A35, 6.

670 Ektha Surana, ‘[Taxation on Cryptocurrency: Guide To Crypto Taxes in India 2024](#)’, *Clear Tax* (Web Page, 4 January 2024).

671 Michelle Legge, ‘[Italy Crypto Tax Guide 2023](#)’, *Koinly* (Blog, 5 January 2023).

672 Zac McClure, ‘[The Essential Guide to Crypto Tax in Portugal for 2024](#)’, *TokenTax* (Web Page, 29 December 2023).

Chapter 13: Looking to the Future

Key Points

- Several options for broad crypto-specific tax policy reforms were raised during consultations, with some identification of these in the Senate Select Committee Report that preceded the Board's Review.
- Whilst the Board does not consider that the Government should consider introducing any of these reforms at the present time, the Board raises them in this chapter so that the Government might consider them in the future, should it consider it appropriate to do so.
- Any potential tax amendment or reform targeted specifically at crypto assets will require a definition of this class of assets that is aligned with the policy objective of the relevant amendment or reform. Such a definition may be difficult, particularly given that the crypto ecosystem is constantly and quickly changing and developing.
- The income tax reform options that the Board raises in this chapter are a low balance election, default revenue or capital treatment, taxing point only at time of conversion to fiat currency, and mark to market and fiat conversion.
- The indirect tax reform options that the Board raises in this chapter are a digital services tax, an excise tax, and a withholding tax. The purpose of these would be to ensure that Australia receives its fair share of cross-border crypto asset transactions.
- The Board also recommends that the Government continue to monitor and review the development and taxation treatment of the fast-growing areas of DAOs, DeFi, GameFi and NFTs, to determine whether these may require specific taxation measures in the future.

Introduction

Some submissions to the Board suggested different options for new legislative taxation regimes specifically dealing with digital assets and transactions. These options were also the subject of some discussion in roundtable consultations with stakeholder groups.

As explained throughout this Report, the Board does not recommend that the Government introduce any new legislation or legislative regime dealing with the taxation of digital assets and transactions at the present time. The full reasons for this are contained in the other chapters in this Report, but very broadly these reasons are:

- The Board has concluded that the provisions in Australia’s existing tax legislation can apply to crypto assets and transactions.
- Any uncertainty as to the way in which the provisions in Australia’s existing tax legislation apply to crypto assets and transactions is best dealt with at the present time by increased ATO guidance upon which taxpayers can rely in fulfilling their taxation responsibilities, informed by consultation with the Board’s proposed Crypto Industry Working Group.
- In light of the complexity and the quickly and continually evolving nature of the crypto ecosystem including but not limited to DeFi and GameFi, the Board considers that any attempt at this time to legislate a new and specific taxation regime to deal with crypto transactions would most likely lead to more legal complexity and potentially more uncertainty.
- The development of an Australian crypto-specific taxation regime may be quickly superseded by ongoing international developments affecting the taxation of digital assets and transactions (including work by the OECD).

Whilst acknowledging the above points against introducing any new legislation or legislative regime dealing with the taxation of digital assets and transactions at the present time, the Board also recognises that it heard a number of concerns as to the manner in which the current taxation rules can operate, and for this reason recommends that the Government continue to monitor the taxation of the crypto ecosystem to ensure that the administrative measures recommended in this Report are sufficiently managing any issues.

Notwithstanding the above comments against legislative change at this time, for completeness in this chapter the Board identifies some different options for crypto-specific legislative regimes for income tax and indirect taxes that were the subject of some discussion during consultations.

Whilst the Board does not recommend the implementation of any of these regimes at the present time, the Government may benefit from an awareness of the different frameworks that have been considered, should they wish to consider these in the future.

The Board notes that any larger scale reform would need to be strategically considered in the context of international developments on tax policy solutions that are developed by comparable jurisdictions and international organisations such as the OECD and the United Nations (UN), as well as domestic tax policy priorities.

The Board also notes that the tax policy proposals referred to in this chapter have been discussed during the Review at a high level, but have not been subject to the detailed review and assessment necessary to understand the implications that they may have on the crypto asset community and how they may align with the remainder of the tax system and government policy objectives. Should the Government wish to consider any of these proposals further, a detailed assessment of the relevant proposal would be required, including further consultation with key stakeholders.

One of the key issues that the Board perceives with the reform proposals set out below is the need to define the crypto assets that will be subject to any new regime. In Chapter 12, the Board detailed its engagement with international Revenue authorities in Canada, NZ, Singapore, UK and US. One of the challenges identified by most of these Revenue authorities was the need for consistency and guidance on proposed definitions. This issue would be compounded by the staticity of such definition, as it would need to adapt to changes in crypto assets over time. The Board sees this as a particular issue given the rapid ongoing development of assets and transactions in this area.

A further key issue that the Government will need to consider is how any reform may apply to existing assets held, including the prospective versus retrospective application of any new legislation.

The first section of this chapter considers potential crypto-specific income tax regimes; and the second section considers potential crypto-specific indirect tax regimes. The final section of this chapter builds on the explanations in Chapter 3 of the fast-growing areas of DAOs, DeFi, GameFi and NFTs, identifies some issues in relation to these, and proposes that the Government continue to monitor and review these areas to determine whether they may require specific taxation measures in the future.

Potential crypto-specific income tax regimes

This first section of this chapter considers the following potential options for legislative regimes dealing with crypto and income tax. These are:

- Low balance election
- Default revenue or capital treatment
- Taxing point only at time of conversion to fiat currency
- Mark to market and fiat conversion.

The Board notes that these options are not all mutually exclusive: for example, the low balance election could be combined with any of the other options.

Option 1: Low balance election

As crypto assets increase in popularity and their functionality and usage extends across a variety of activities, many people undertake minor crypto transactions, holding and utilising small balances of crypto assets throughout the year.

The Board has considered the demographics of crypto asset users throughout the Report and highlighted the importance of establishing positive engagement with the tax system for these taxpayers, many of whom may be engaging with the tax system outside of basic salary and wages obligations for the first time. Additionally, the Board has noted that the high cost of tax advice and compliance in the crypto asset space is often disproportionate to the tax obligation concerned.

To address this complexity and high compliance cost, several stakeholders have proposed that the Government should consider the use of a low balance election, to exempt taxpayers with a small balance of crypto assets or value of crypto asset transactions throughout the reporting period from the obligation to declare such transactions.⁶⁷³

673 For example, in Submission A33, 34; Submission A08, 5. In Submission A25, 3, Oracle Accounting noted a low balance election may reduce compliance costs but questioned whether this would be the case for those with a large number of trades as they would still need to establish their cumulative profits were below the reportable threshold.

The proposal raises a number of key issues, including:

- the identification of the crypto assets and /or the class of taxpayers to which the low balance rule would apply
- whether the low balance rule would be elective or prescriptive
- how losses would be treated
- at what level any low balance election should be set.

Some international jurisdictions have implemented a low balance election specifically for virtual or crypto assets:

- **Germany**

Private investors are entitled to an exemption provided that crypto assets are held for more than one year. For short term gains, the exemption is limited to €600.⁶⁷⁴

- **Italy**

Previously tax was only levied tax on cryptocurrency where the portfolio value was over approximately €51,000 however following the 2023 budget capital gains tax is now payable on any crypto asset gains over €2,000.⁶⁷⁵

- **Portugal**

Exempts crypto assets held for more than a year from capital gains tax, with tax applicable to short term gains.⁶⁷⁶

- **United States**

Under the proposed *Responsible Financial Innovation Act*, gains or losses from the sale or exchange of virtual currency in a personal transaction for goods or services, will be exempt from income tax up to a limit of USD 200.

The following table provides a high-level overview of some relevant areas that would need to be considered in exploring a low balance exemption.

674 As referenced in Submission A10, 18; Submission A25, 3; Submission A35, 6.

675 Michelle Legge '[Italy Crypto Tax Guide 2023](#)', *Koinly* (Blog, 5 January 2023).

676 Submission A35, 6. Henrique Almeida, '[Crypto taxes can't stop the party in Portugal](#)', *Bloomberg* (Web Page, 19 October 2022).

Proposal / Solution	Perceived rationale and benefits	Preliminary assessment of issues and sensitivities
<p>Low balance exemption (<i>de minimis</i> rule), exempting taxpayers with a small balance or low value of transactions from tax disclosure obligations on crypto asset transactions.</p>	<p>Reduces the compliance burden for taxpayers undertaking minor crypto investments.</p> <p>Encourages positive engagement with the tax system.</p>	<p>Crypto assets need to be defined for the purposes of the regime. Additionally, there may be the need for definitional flexibility or changes over time.</p> <p>Need to determine appropriate low balance limit and basis of limit (e.g. asset balance, quantum of transactions etc.).</p> <p>Tax treatment applied to crypto assets may differ from treatment applied to other non-crypto assets.</p> <p>Potential revenue impact (e.g. exemption of otherwise taxable transactions).</p>

The Board notes that the introduction of a low balance election for crypto assets and transactions would be inconsistent with how other assets are treated under Australian tax law: for instance, there is no *de minimis* rule for shares. Such treatment may suggest that crypto assets have an economic importance that exceeds that of other forms of exchange. Further, whilst a *de minimis* rule might be introduced for simplicity, in practice it could lead to integrity concerns or complexity. For instance:

- provisions dealing with the deductibility of related expenditure may have to be included
- some taxpayers may be incentivised to spread crypto asset holdings across various controlled entities, and legislative measures to combat this could lead to added complexity
- carve outs may need to be considered – for example, low holdings but high turnover in the course of trading.

Option 2: Default revenue or capital treatment

In Chapter 7, the Board set out the complexity that arises in classifying crypto asset transactions as being on capital or revenue account. The Board notes that while the principles established at common law for determining if a transaction should be treated on capital or revenue account are generally sufficient, it will take some time before there are precedents that deal with or provide guidance in relation to many crypto asset activities.

In recognition of this complexity, the Board received various submissions proposing that a default treatment be applied to crypto asset transactions.⁶⁷⁷

The Board notes that a deeming rule to treat certain assets as being held on capital account has some precedent – for example the ability of certain managed investment trusts to make a capital election under Subdivision 275-B of the ITAA 1997, and the treatment of some assets held by superannuation funds as being on capital account (see Chapter 8).

This option raises a number of preliminary issues that would need to be considered, including:

- whether the default characterisation should be revenue or capital
- the identity of taxpayers to whom the rules would apply
- whether the rules should apply on an elective or prescriptive basis
- the additional features that are necessary to ensure revenue neutrality (such as quarantining of losses).

The Board notes that an analysis of a default or opt-in treatment of crypto asset transactions on revenue or capital account would require extensive exploration of how this aligns with the desired policy outcomes for crypto assets, noting the different taxation outcomes that potentially apply to revenue versus capital treatment (for example, the CGT discount that applies to certain capital gains and not revenue gains, the quarantining of capital losses against capital gains).

The following table provides a high-level overview of some relevant areas that would need to be considered in exploring a taxing regime which applies a default capital or revenue treatment to crypto asset transactions:

677 In Submission A30, 5, KPMG proposed a one-off election to apply CGT treatment for certain assets, with a similar proposal noted by the Joint Bodies in Submission A33, 30.

Proposal / Solution	Perceived rationale and benefits	Preliminary assessment of issues and sensitivities
<p>Introduce either a default capital or default revenue treatment for transactions involving crypto assets (i.e. a single treatment is applied to all crypto asset holdings for all taxpayer users).</p> <p>This treatment could apply to only some taxpayers, for example superannuation funds and/or individuals.</p>	<p>Removes uncertainty in determining the appropriate capital/revenue classification of crypto asset transactions resulting from absence of common law relating to crypto asset transactions.</p> <p>Default treatment leads to reduced complexity and compliance costs for taxpayers.</p>	<p>Crypto assets need to be defined for the purposes of the regime. Additionally there may be the need for definitional flexibility or changes over time.</p> <p>Tax treatment applied to crypto assets may differ to other assets; and may breach the equity and functional neutrality principle (see chapter 5).</p> <p>May result in a revenue impact. Extensive work would be required to determine the actual revenue impact, given various issues (e.g. elective or prescriptive regime, expected losses versus gains, application of CGT discount to default capital election etc.).</p> <p>Requires consideration of policy principles underlying the proposal:</p> <ul style="list-style-type: none"> • Should a default treatment be elective or prescriptive? • Should the regime be combined with other features such as quarantining of losses on crypto assets?

Option 3: Taxing point at time of conversion to fiat

As set out in Chapter 2, the Board’s Review arose from the Government’s response to the Senate Select Committee Report which said (amongst other things) that it can very difficult for taxpayers to correctly assess their CGT liabilities under the current tax law and ATO guidance for these transactions, and then said the following:

Some submitters to the inquiry argued that CGT taxation points should be removed altogether for crypto-to-crypto transactions; that is, CGT should only be applied at the ‘on and off ramp’ points where digital assets are traded for fiat currency or similar. While the committee agrees that this would simplify the CGT rules for digital assets considerably, this approach may risk leakage of tax revenue in cases where significant crypto-to-crypto transactions are occurring in ways that accrue a clearly definable capital benefit.

As such, the committee is recommending that the CGT rules be amended so that digital asset transactions only create a CGT event when they genuinely result in a clearly definable capital gain or loss.⁶⁷⁸

Several submissions to the Board's Review proposed that the Board explore limiting taxing events to those events where crypto assets are converted to fiat currency or exchanged for goods and services ('on/off ramp transactions').⁶⁷⁹ The approach is broadly based on the proposition that until a crypto asset has been converted into fiat currency, any resulting gain or loss has not been realised. Many of the income tax issues noted by the Board in Chapter 9 occur because taxation consequences potentially arise in respect of transactions *within* the crypto asset ecosystem. Focusing on transactions that involve crypto assets entering and leaving the crypto asset ecosystem is likely to simplify the system, but other issues (including revenue neutrality) would need to be carefully considered and quantified.

The following table provides a high-level overview of some relevant areas that would need to be considered in exploring a taxing regime which limits taxing events to the point of conversion of crypto assets to fiat currency or exchange for goods and services.

678 Senate Select Committee Report (n 9) 140 [6.49], [6.50].

679 Submission A28, 52; Submission A35, 7; Submission A25, 4.

Proposal / Solution	Perceived rationale and benefits	Preliminary assessment of issues and sensitivities
<p>A taxing event occurs only at the time that a crypto asset is converted to fiat currency or exchanged for goods and services.</p> <p>A methodology for allocating cost to the transaction will be required, such as through an averaging or pooled cost style methodology.</p>	<p>Potentially simplifies the application of tax law to crypto asset transactions.</p> <p>Taxpayers would not be required to assess the tax implications of crypto asset-to-crypto asset transactions.</p>	<p>Crypto assets need to be defined for the purposes of the regime. Additionally, there may be the need for definitional flexibility or changes over time.</p> <p>Tax treatment applied to crypto assets may differ from other assets; and may breach the equity and functional neutrality principle (see chapter 5).</p> <p>Potential revenue impact as there is no taxing event for crypto asset-to-crypto asset transactions. This will be subject to the direction of the market, however this may provide opportunity to indefinitely defer a taxing event by not converting to fiat.</p> <p>Requires consideration of policy principles underlying the proposal, including whether regime should be elective or prescriptive.</p>

Option 4: Mark to market and fiat conversion

As set out in the above table, a proposal that limits the taxing event on crypto to the time that it is converted to fiat currency may create a risk that the taxing point is able to be indefinitely deferred, resulting in the accumulation of wealth in crypto assets without the incidence of tax. One proposal, aligned with the simplicity of identifying a taxing point at the time of conversion to fiat, is to apply modified 'trading stock' style rules to crypto assets.

The precise form of the arrangements would need to be considered further but, as an example, the Board notes that such a methodology could be structured such that:

- purchases of crypto assets are deductible
- an amount is included in assessable income when a crypto asset is converted to fiat currency or exchanged for goods and services
- at the end of each year:
 - any increase in value of crypto assets held at end of year versus start of year is assessable
 - any decrease in value of crypto assets held at end of year versus start of year is deductible.

This methodology is essentially a modified trading stock regime. However, unlike the trading stock rules in Division 70 of the ITAA 1997:

- there would be no requirement for the taxpayer to be carrying on a business in order to apply the treatment
- there would be no requirement to account for any transactions undertaken within the crypto ecosystem, such as where one crypto asset is disposed of in exchange for another
- the crypto asset holdings at the end of the year would be valued at market value (cost or replacement value options available under trading stock regime would not be available).

This approach has the potential to include unrealised gains as assessable income and unrealised losses as allowable deductions because of the requirement to determine the market value of crypto assets at the end of an income year. Whether this is consistent with wider policy objectives would need to be reviewed and considered further.

The Board considers that the differences between this regime and the trading stock measures may require new legislative provisions to be included, rather than seeking to rely on the trading stock rules with modifications. The Board notes that a recent example of this approach is the rules in Division 420 of the ITAA 1997 which apply what is essentially a 'trading stock type' regime to registered emission units.

The following table provides a high-level overview of relevant areas that would need to be considered in exploring a taxing regime which requires the taxpayer to report the net movement in crypto asset holdings throughout the period.

Proposal / Solution	Perceived rationale and benefits	Preliminary assessment of issues and sensitivities
<p>Proposal is similar to a modified trading stock regime, where purchases of crypto assets are deductible and an amount is included in assessable income when a crypto asset is converted to fiat currency or exchanged for goods and services.</p> <p>At the end of each year the movement in the market value of crypto assets held at the end of the year versus the start of the year is:</p> <ul style="list-style-type: none"> • assessable where there is an increase in market value • deductible where there is a decrease in market value. 	<p>Potentially simplifies the application of the tax rules to crypto asset transactions as there would be no requirement to assess the tax implications of crypto asset-to-crypto asset transactions.</p>	<p>Crypto assets need to be defined for the purposes of the regime. Additionally there may be the need for definitional flexibility or changes over time.</p> <p>Tax treatment applied to crypto assets may differ from other assets; and may breach the equity and functional neutrality principle (see chapter 5).</p> <p>May result in a revenue impact as there is no taxing event for crypto asset-to-crypto asset transactions. However, the inclusion of the movement in the value of the crypto assets, may reduce the revenue impact of assets being 'locked-in' as crypto assets.</p> <p>Requires consideration of policy principles underlying the proposal including:</p> <ul style="list-style-type: none"> • The appropriateness of a taxing regime based on unrealised gains and losses. Such regimes are currently only used in limited circumstances and are typically elective rather than prescriptive. • Should the regime be combined with other features such as quarantining of losses on crypto assets?

Difficulties with a market to market and fiat conversion regime would include the taxing of unrealised gains in a volatile market such as crypto.

Potential crypto-specific indirect tax regimes

Introduction

This second section of this chapter considers the following potential indirect tax crypto-specific legislative regimes:

- Digital Services Tax
- Excise Tax
- Gross-based withholding tax.

Option 1: Digital Services Tax

The Board is aware of the growing concern about the international taxation of crypto assets and more broadly the taxation of the digitalisation of the economy. Prior to the development of the OECD inclusive framework dealing with Base Erosion and Profit Shifting (BEPS), several countries dealt with this growing concern by introducing digital services taxes.

A Digital Services Tax (DST) was described in 2020 as:

a tax on selected revenue streams of multinational digital companies. Revenue streams that may be taxed by a country include advertising, intermediation, and digital marketplaces and data transmission. The rationale for the DST is to attempt to capture profits that are generated in a country but then sifted offshore by digital MNEs [multinational enterprises].

The DSTs implemented to date generally have a very high tax-free threshold which ensures that the tax only applies to large MNEs which are thought to make a significant amount of profit in the domestic country. By construction it is usually targeted at Google, Apple, Facebook and Amazon and is thus known as the “GAFA tax”. DSTs have gained political traction and media attention over the past few years, particularly in light of the high profile of these companies.⁶⁸⁰

Sanger and Thomas have analysed the European Commission’s (EC) two digital tax proposals:

- ‘The first proposal is described as an ‘interim’ 3% digital services tax (DST) on gross revenues (i.e. turnover) derived from activities in which users are deemed to play a major role in value creation.

680 Clara Hathorne and Robert Breunig, ‘Digital Service Taxation: An introduction and policy options for Australia’, Tax and Transfer Policy Institute ([Policy Brief 7/2020](#), December 2020).

- The Commission's second, longer-term proposal is far broader, with more than 50 different digital activities potentially subject to tax. A 'significant digital presence' (SDP) concept would result in a new digital permanent establishment (PE) definition, intended to establish taxable nexus, along with revised profit allocation rules to determine how the taxes on digitally derived profits are distributed among countries.⁶⁸¹

The EC was unable to find the necessary unanimous support for the proposal to be adopted. However, it has indicated that, in case the OECD does not reach an agreement, it will resume its work on taxing the digital economy.

If Amount A of Pillar One⁶⁸² fails to reach consensus, it is likely that many more countries will enact DSTs. DSTs generally have low rates (below 5%), are politically popular in some jurisdictions, and may have significant revenue generating potential (the UK DST brought in more revenue than expected).

However, if Amount A of Pillar One reaches consensus, the jurisdictions that ratify the agreement are expected to be required to abolish all DSTs and relevant similar measures when the agreement comes into effect.

The newly elected NZ Government has chosen to reinstate the Digital Services Tax Bill tabled by the previous NZ Government that will enable it to impose DST with effect from 1 January 2025 at the earliest. It proposes a 3% turnover tax, applied to large groups that provide taxable digital services to persons in NZ. Digital services will include activities related to user data gathered in connection with a platform, service, engine, or advertising.

Option 2: Excise tax

A further alternative for an indirect tax in relation to crypto assets, might be possible through the use of an excise tax.

Excise has been defined as 'a commodity-based tax levied on the manufacture or production of selected goods in Australia (including liquid fuel, tobacco and some alcoholic beverages). Imported equivalents are subject to an excise-equivalent customs duty.'⁶⁸³

Under current Australian law, excise duty is imposed on the domestic manufacture of petroleum fuels, certain biofuels, alcoholic beverages other than wine, tobacco products, crude oil and oils and lubricants. Equivalent duties on identical imported products are imposed through customs duty, along with tariffs

681 Chris Sanger and Rob Thomas, '[New digital tax policies What, when, where, how and by whom?](#)' (2018) EY's Global Tax Policy and Controversy Brief.

682 Amount A of Pillar One has been developed as part of the Two-Pillar Solution for addressing the tax challenges arising from the digitalisation of the economy. It provides jurisdictions in which consumers and users are located, a new taxing right over a portion of the residual profits of the largest and most profitable multinational enterprises in the world: OECD, [Pillar One Amount A Fact Sheet](#) (Fact Sheet, accessed 29 January 2024).

683 Ken Henry et al, *Australia's Future Tax System: Report to the Treasurer, Part One, Overview*, Commonwealth of Australia, Canberra (Report, December 2009) 172.

imposed on imported goods for the purpose of protecting domestically produced goods.⁶⁸⁴ In a recent and notable High Court decision, it was held that a charge based on the distance travelled by an electric vehicle was also an excise.⁶⁸⁵

Federal Treasury consider that ‘excises are typically applied to goods with a relatively inelastic demand⁶⁸⁶ and where the number of manufacturers is limited.’⁶⁸⁷ Such characteristics could be well suited to the taxing of digital services. However, Treasury advise that there is a major negativity with an excise tax namely, ‘an increased incentive to avoid taxation.’⁶⁸⁸ These matters could be considered further, should the Government wish to consider an excise tax in relation to digital services.

Option 3: Gross-based Withholding Taxes on Digital Services

The purpose of Australia’s withholding tax rules is to enable the efficient and timely collection of tax revenue on an ongoing basis. The obligation to withhold rests with the ‘payer’ of funds, not the recipient. Under these rules, the payer must withhold an amount from certain payments it makes and then pay that amount to the ATO, usually in regular instalments throughout the year, depending on the size of the entity or the nature of the transaction to which it relates.

Withholding taxes may operate as a final taxing point, such as is generally the case with withholding taxes for foreign investors; or alternatively as retention at the time of payment of an income amount and provided as an offset when the final tax is calculated at the end of the year, such as PAYG withholding on salary and wages or foreign resident capital gains withholding (FRCGW) on the disposal of property over a certain value.⁶⁸⁹

Withholding taxes are often paid where dividends, interest or royalties are paid by an Australian resident to a foreign entity. For foreign resident withholding taxes, the rate is typically set out in the relevant double tax agreement.

In Vertex’s submission to the Review, they proposed a regime whereby decentralised virtual/crypto asset service providers would ‘enable user compliance through use of a pay as you go approach’, which they considered would enable these service providers to ‘withhold taxes, taxes which users/taxpayers can claim by presenting necessary information to the tax administration, all of which is done on the native blockchain networks’.⁶⁹⁰

684 Sam Reinhardt, Lee Steel, ‘[A Brief History of Australia’s Tax System](#)’ (Winter 2006) *Economic Round-up 22* (‘A Brief History of Australia’s Tax System’).

685 *Vanderstock & Anor v State of Victoria* [2023] HCA 30.

686 A Brief History of Australia’s Tax System (n 684): Inelastic demand means that excise taxes can be applied without creating undue distortions to consumption decisions, the hallmark of an efficient tax.

687 A Brief History of Australia’s Tax System (n 684).

688 A Brief History of Australia’s Tax System (n 684).

689 Currently applies to real property disposals where the contract price is \$750,000 or more and certain conditions are met.

690 Submission A11, 7.

Such a withholding tax could apply to many or all digital asset platforms (such as crypto exchanges), although not all withholding could be done on the native blockchain networks. One issue that might arise is whether this could be done for all crypto asset transactions and if not, whether it would disadvantage those who use digital asset platforms rather than interact with the blockchain directly. Considerable work would have to be done as to whether such a mechanism would assist to avoid revenue leakage and if so, the costs to simplicity and equity that might ensure.

The following table provides a high-level overview of relevant areas that would need to be considered in exploring a withholding tax regime for crypto assets.

Proposal / Solution	Perceived rationale and benefits	Preliminary assessment of issues and sensitivities
<p>Withholding of tax on transactions by digital asset platforms.</p>	<p>Improve collectability of taxes by shifting burden to digital asset platforms.</p>	<p>Australia will only have the power to apply the regime to Australian based exchanges and transactions undertaken on foreign exchanges or off-chain will not be captured.</p> <p>There will be complexity in determining relevant rate as it will be based on proceeds not gains and apply to cross section of taxpayers.</p> <p>Does not reduce complexity if not a final tax. A precedent exists with the FRCGW regime (12.5% of proceeds).</p>

Conclusion on options for reform

Recommendation 13.1

Some options for crypto-specific legislative taxation regimes were raised with the Board during consultations.

The Board does not recommend the introduction of any crypto-specific legislative taxation regime at the present time, when the crypto ecosystem is changing and developing rapidly. Even if the crypto ecosystem was more settled, a crypto-specific legislative taxation regime could raise issues such as ensuring confined and applicable definitions, acting contrary to neutrality, potential integrity concerns, increased complexity and barriers to entry for a developing market.

Should the Government decide to explore the suitability of introducing a crypto-specific legislative taxation regime at some time in the future, the Government may decide to consider one or more of the options identified in this Chapter 13, which were the subject of varying levels of discussion during the Review.

Should the Government decide to consider any of these options in the future, the Board recommends that the Government undertake further consultation with key stakeholders and a further detailed review in relation to any option that it might consider.

Areas to watch

Background

In Chapter 9, the Board addressed the tax treatment of those specific transactions that occur with crypto assets that were particularly highlighted throughout its consultation. However, the Board acknowledges that this represents a 'point in time' reflection of issues of particular interest to crypto taxpayers and their advisers.

Since their inception, the evolution of crypto assets and the frameworks within which they operate has been rapid and often unpredictable. In undertaking its Review, the Board is mindful that this evolution is not slowing down. The Board's consultations together with its own research indicates that areas in the crypto ecosystem that are currently increasing in scale and developing at a particularly fast rate are DAOs, DeFi, GameFi, and NFTs, each of which was introduced in Chapter 3.

During its consultations, the Board received some submissions in relation to taxation of these areas, but there was acknowledgement that these areas are currently undergoing much change and development, that other work is currently being undertaken in relation to government regulation of these areas, and that any taxation initiatives would have to be subject to and consistent with any regulatory initiatives that the

Government may decide to implement. For these reasons, as well as for the reasons set out in this Report, the Board does not consider that the Government should implement any legislative changes to deal with taxation law as it applies to these areas at the present time.

However, the Board expects that the application of taxation laws in these areas will become of increasing interest to participants in the crypto ecosystem and their advisers. The Board recommends that the ATO continue to monitor the tax treatment of new and evolving crypto assets and transactions in accordance with existing rules and principles, and anticipates that such monitoring will include attention being given to these areas.

The remaining paragraphs in this chapter explain these four areas further, and potential taxation issues that may arise in relation to them.

Decentralised Autonomous Organisations

As the crypto ecosystem has evolved, so has the associated organisational structures through which these assets operate. DAOs have become an important feature of the crypto ecosystem.⁶⁹¹

The World Economic Forum has described DAOs as:

organizational structures that use blockchains, digital assets and related technologies to direct resources, organise activities and make decisions. Community-oriented and code-driven, DAOs attempt to provide an alternative to traditional organizational forms by making operational information publicly available and enabling members to participate in governance.

...

DAOs aim to enable communities to achieve their goals while reducing the need for intermediaries or centralized leadership to manage operations. DAOs typically run on public, permissionless blockchains, with their actions and governance encoded in opensource software and enforced by smart contracts.⁶⁹²

DAOs have on-chain governance, although some may have some component of centralised governance whether formally or informally by a small number of individuals holding large percentages of governance tokens – see Chapter 3.

DAOs are a means of raising capital by holders of an underlying token or NFT, with investors subsequently holding governance tokens that will give them eligibility to vote on how the DAO will use its funds.

Australia does not currently have a regulatory framework or classification of DAOs and DAOs are not legal entities. While the taxation legislation has an expanded definition of ‘entity’ that includes partnerships,

691 [‘What is decentralized autonomous organisation and how does a DAO work?’](#), *Cointelegraph* (Web Page, accessed 13 December 2023).

692 World Economic Forum, *Decentralized Finance Toolkit* (n 143) 6-7.

other unincorporated association or body of persons and trusts,⁶⁹³ a token interest in a DAO does not readily fall within any of these categories notwithstanding that DAOs may have some similarities to an interest in a partnership or an equity interest.

The Board has heard that the lack of clarity in relation to the classification of DAOs drives complexity in taxation. As highlighted in *Blockchain & Digital Assets – Services + Law* submission:

In large part, my view is that confusion stems from the lack of guidance regarding the characterisation of a DAO as an entity (or entities) for tax purposes. If a DAO does not fit within any of the existing entity types, there is a need to legislate recognition of ‘personless protocols’ and ‘non-counterparty property’ and/or move to an activities bases of taxation.⁶⁹⁴

Similarly, Koinly noted:

The tax treatment of DAOs is unclear, stemming from uncertainty as to its legal characterisation. A DAO fundamentally differs from existing partnerships or companies in the decentralised way they operate. DAOs do not neatly fit into an existing company or partnership structure, and doing so creates outcomes that are not reflective of the economic functions and operations of a DAO.⁶⁹⁵

Internationally, the UK Law Commission undertook a public call for evidence between November 2022 and February 2023 (the pre-consultation period) in relation to the characterisation of DAOs, with a view to moving to consultation and policy development following that phase. The call asked for information on how DAOs are structured and operated and how they might integrate into existing legal frameworks.

In the US, various states have passed legislation in relation to DAOs, including Utah, who passed legislation allowing any DAO formed in the state that is not registered as a for-profit or non-profit entity to be treated equivalent to a domestic limited liability company, with New Hampshire entertaining similar legislation.⁶⁹⁶ The World Economic Forum has recognised that a DAO may ‘be wrapped in a formal entity structure’ so as to access benefits such as limited liability, but that even where a DAO does not explicitly create a legal wrapper, it ‘may be recognized by default under the law as an unincorporated association or a partnership.’⁶⁹⁷ This can raise issues of personal liability for those holding governance tokens. There have been some decisions offshore by regulators and courts that raise these issues.⁶⁹⁸

693 ITAA 1997 sub-s 960-100(1).

694 Submission A27, 1.

695 Submission A10, 13.

696 Chainalysis team, [‘Introduction to Decentralized Autonomous Organizations \(DAOs\)’](#), *Chainalysis* (Blog, 7 April 2023).

697 World Economic Forum, *Decentralized Finance Toolkit* (n 143) 17.

698 See Jonathan Mollod & Jason Finger, [‘DAO Deemed ‘General Partnership’ in Negligence Suit over Crypto Hack, Prompting Decentralized Orgs to Rethink Corporate Formation’](#), *Proskauer* (Web Page, 28 April 2023); [‘From Code to Consequence: CFTC Obtains Default Judgment Against Ooki DAO for Commodity Exchange Act Violations’](#), *Proskauer* (Web Page, 20 July 2023); [‘Statement of CFTC Division of Enforcement Director Ian McGinley on the Ooki DAO Litigation Victory’](#) (Media Release 8715-23, Commodity Futures Trading Commission (CFTC), 9 June 2023); Danny Nelson, [‘SEC Blasts ‘Purportedly Decentralized’ DAOs in \\$1.7M Settlement with BarnBridge’](#), *Coindesk* (Web Page, 23 December 2023).

Since their inception, DAOs have grown globally to being represented by upwards of 9.9m governance token holders with a total treasury of around USD 30.4 billion.⁶⁹⁹ While much of these of these funds will be concentrated under particular groups of holders outside of Australia, the Board's consultations indicated that the number of Australians holding tokens in DAOs are not insignificant.

The focus of Australia's current examination crypto asset regulatory issues following the token mapping exercise undertaken in early 2023,⁷⁰⁰ is Treasury's review of the regulatory and licencing regime for crypto asset secondary service providers.⁷⁰¹ Further work is expected to be undertaken in relation to DAOs in the future and the Board recommends that consideration to be given to the taxation treatment of DAOs following clarification of the relevant regulatory framework.

Currently, the ATO does not provide any public guidance in relation to DAOs.

Some of the issues raised in consultations include:

- the role of DAOs in transactions including airdrops, initial coin offerings (ICOs) and DeFi transactions⁷⁰²
- the characterisation of DAOs (are they an entity?) and whether the income in DAOs should be taxed at the entity or investor level (akin to a partnership or company)⁷⁰³
- whether corporate tax residency from a central management and control perspective, could be influenced by the existence of a DAO⁷⁰⁴
- the source of DAO transactions⁷⁰⁵
- when a DAO is carrying on an enterprise for GST purposes⁷⁰⁶
- the application of the mutuality principle to a DAO⁷⁰⁷
- the tax treatment of proceeds of raising capital for a DAO⁷⁰⁸
- the potential restructure rollover relief for transition to DAOs following regulation⁷⁰⁹
- DAOs and the not-for-profit (NFP) sector.⁷¹⁰

The outcome of these issues may be important to Australia's revenue base.

699 ['Organizations'](#), *Deep DAO* (Web Page, accessed 27 January 2024).

700 The Treasury, *Token Mapping Consultation Paper* (n 4).

701 The Treasury, *Regulating Digital Asset Platforms* (n 10).

702 Submission A19, 27.

703 Submission A10, 13; Submission A39, 1; Submission A38, 2.

704 Submission A20, 14; Submission A30, 10; Submission A33, 8; Submission A38, 2.

705 Submission A30, 10.

706 Submission A20, 15.

707 Submission A24, 3; Submission A35, 5.

708 Submission A24, 4.

709 Submission A33, 34.

710 Submission A27, 9.

Decentralised Finance

The Board has addressed the challenges in relation to taxation of various aspects of DeFi arrangements in Chapter 9. DeFi activities cover a broad range of activities including trading, staking, borrowing or lending of crypto assets by others.

DeFi is an effort to replicate certain functions of the traditional financial system in an open, decentralised, permissionless and autonomous way, based on blockchains.⁷¹¹ Across the period from July 2020 to November 2021, DeFi applications on the Ethereum blockchain grew approximately 2,150% to approximately USD 100 billion.⁷¹² The rapid growth of this space and the appeal of it to often young retail investors, highlights a need for clarity not only in relation to regulation but to the associated tax treatments.

Certain activities undertaken within DeFi space are analogous to those undertaken within traditional centralised finance arrangements and one issue for consideration is the appropriateness of alignment between the tax treatment of activities across these spaces, having regard to Principle 3 'Equity and Functional Neutrality' and Principle 4 'Competitive Neutrality' in Chapter 5 of this report.

Gaming Finance

As explained in Chapter 3, GameFi is the intersection of gaming and finance driven by the use of blockchain, NFTs and smart contracts. It represents a rapidly emerging and distinct segment. Unlike in traditional gaming environments, game players can acquire NFTs or crypto assets for participating in and accumulating resources while playing the game, as in game currency or in-game assets and stored in a digital asset wallet or traded in a secondary market.⁷¹³

The global GameFi market is expected to reach USD 90.51 billion by 2031.⁷¹⁴ Prominent GameFi platform, Axie Infinity, peaked at 2.8 million users in late 2021 and while statistics in relation to Australian users are not known, it would be a reasonable conclusion that many thousands of Australians are engaging with these platforms. Many of the 'AAA' gaming companies⁷¹⁵ are now developing blockchain games and releasing their own NFTs.⁷¹⁶

As GameFi develops, together with the related Web3 and Metaverse technologies (see Chapter 3), the application of existing tax principles to them will continue to be required. In particular, the Metaverse presents new challenges for taxation, particularly in relation to when taxation may arise, including whether economic gains within the Metaverse should be taxed immediately upon receipt or deferred until realisation or cash-out from the Metaverse.⁷¹⁷

711 OECD, *Why Decentralised Finance (DeFi) Matters and the Policy Implications* (Report, 2022) 3.

712 OECD, *Why Decentralised Finance (DeFi) Matters and the Policy Implications* (Report, 2022) 15.

713 Pooja Singh, Arushi Goel, 'What is GameFi', *World Economic Forum* (Blog, 23 November 2022).

714 Business Research Insights, *GameFi Market Report Overview* (Report, 27 November 2023).

715 Classification used to categorise video games produced and distributed by a mid-sized or major publisher, which typically have higher development and marketing budgets than other tiers of publishers.

716 Submission A37, 7.

717 Young Ran (Christine) Kim, 'Taxing the Metaverse' (2024) *112 Georgetown Law Journal* (forthcoming).

Submissions to the Review highlighted the nature of GameFi activities and prevalence of young or inexperienced taxpayers participating in this environment. A variety of potentially taxable events may occur within this environment. Koinly provided the following examples:

Investors buy a gaming NFT (character) and use that character to earn crypto assets in-game. The crypto assets earned are often used as a cost to breed the NFT with another NFT character to create an egg that will hatch into a new character over time. As these characters breed, they move toward a breeding cap, which depreciates their value. There are numerous occurrences of NFTs as a result of breeding alone – for example, NFT characters can be retained or burned to create new NFTs. Each of these actions, based on current interpretation, could be taxable events (e.g. disposing of in-game tokens in order to create a new NFT).

Another common theme within GameFi is scholarships. This is where investors loan crypto assets to individuals who are able to use their NFTs to generate additional crypto. In this model, new assets are split between the owner and the player. In this method, both the owner and the renter create hundreds of potential income-generating taxable events (noting that such activities may be akin to running a business). It should be noted that every game is different in the way they generate play-to-earn style rewards.⁷¹⁸

The Board has noted in Chapter 7 that there is a need for clarity about the circumstances in which the personal use exemption may apply to gains that would otherwise be taxable as capital gains and where the activities of a crypto asset user may cross over into that of carrying on a business.

In their submission to the Review, FinTech noted that given the rapidly evolving nature of transactions, a principles-based approach is required in respect of the taxation of GameFi activities.⁷¹⁹

More broadly in relation to the Metaverse, PwC highlighted the GST issues that arise in this space:

- Do participants in the ‘Metaverse’ carry on an enterprise for GST purposes (this is particularly relevant for ‘play to earn’ gaming)?
- Will a ‘Metaverse’ operator be considered an ‘Electronic Distribution Platform’ operator for GST purposes?
- How will participants in the ‘Metaverse’ identify when they transact with non-resident counterparties?
- Does the location of the ‘Metaverse’ operator / servers impact the location of transactions taking place in the ‘Metaverse’?⁷²⁰

Non fungible tokens

As set out in Chapters 3 and 10 of the Board’s Report, NFTs have broad and diverse capability. However, these assets may present a variety of complex tax issues in connection with the process of minting, transferring, and royalty payments as well as addressing the overarching categorisation of various NFTs.

718 Submission A10, 11–12.

719 Submission A37, 7.

720 Submission A36, 27.

In the Joint Bodies' submission to the review, they noted the functional distinctions between NFTs and cryptocurrencies, the challenges in relation to the categorisation of personal use assets for CGT purposes and how NFTs may operate for a business taxpayer.⁷²¹

EY noted the following challenges facing the categorisation of NFTs for tax purposes:

- NFTs may represent a digital asset and/or an underlying tangible asset
- NFTs may be one of a kind, part of a limited run or part of a larger commercial scale production
- NFTs may have rights attached, the rights may be embedded as self-executing code or attached as part of a separate written contract
- NFTs may provide owners with membership rights to exclusive clubs, these rights may or may not have market value
- NFTs may provide a holder with the right to contribute to the decision making within an associated DAO
- NFTs may be used to authenticate associated assets or prove identity
- NFTs may be used in GameFi or to represent digital assets in the metaverse
- The price of NFTs may be determined by the open market or have a floor price set by an NFT community
- NFTs may be traded directly between privately owned wallets, via certain DEXs or digital NFT marketplaces (e.g. Opensea)
- the minting of NFTs may incur 'gas' fees
- where embedded rights to commission which self-execute on each subsequent sale, the commission collected may be treated as ordinary income for the original NFT 'artist' and may trigger withholding obligations dependent on the jurisdiction of the sale or exchange.⁷²²

Another issue to be considered in the context of NFTs is the tax implication on minting the NFT, whether the minted asset is on-chain or off-chain.

721 Submission A33, 11.

722 Submission A20, 7.

Recommendation 13.2

The Board's stakeholder consultations together with its own research indicates that areas in the crypto ecosystem that are currently increasing in scale and developing at a particularly fast rate are DAOs, DeFi, GameFi, and NFTs.

The Government may like to consider undertaking further work in relation to the taxation implications of these four areas in the future particularly in light of any policy responses made to the regulation of such activities.

In the meantime, the Board recommends that the ATO continue to consider the tax treatment of new and evolving crypto assets and transactions in accordance with existing rules and principles, including in relation to these four areas.

Appendix A: Consultation process and participants

Written submissions

In August 2022, the Board published a Consultation Guide which provides an overview of crypto assets and the current taxation treatment within Australia. The guide outlined recent relevant government reports and announcements and posed a series of questions for interested parties to consider when formulating input to the review.

The Board received 41 written submissions during the consultation period from the following organisations and individuals:

Submission Reference	Name of party	Date received
A01	Darren Gerlach	22/08/2022
A02	Darcy Financial	23/08/2022
A03	Tailored Accountants	29/08/2022
A04	Darrell James Wood	26/08/2022
A05	Sam Irwin	12/09/2022
A06	Razwina Raihman	19/09/2022
A07	Doxed Capital	23/09/2022
A08	Dr Elizabeth Morton; Ms Lisa Greig; Mr James Carey; Ms Veronika Komarenko; Ms Maryna Kovalenko (Members of the Tax Profession)	27/09/2022
A09	Syla	29/09/2022
A10	Koinly	29/09/2022
A11	Vertex Inc	30/09/2022
A12	Coinbase	30/09/2022
A13	Stephen Rider	30/09/2022
A14	Australian Bankers Association	30/09/2022
A15	Swyftx Pty Ltd	30/09/2022
A16	Australian Bitcoin Industry Body	30/09/2022

Submission Reference	Name of party	Date received
A17	Ashurst	30/09/2022
A18	Minter Ellison	30/09/2022
A19	Cadena Legal	30/09/2022
A20	EY	30/09/2022
A21	CONFIDENTIAL	30/09/2022
A22	HopgoodGanim Lawyers	30/09/2022
A23	SMSF Association	30/09/2022
A24	Gilbert + Tobin	30/09/2022
A25	Oracle Accounting	30/09/2022
A26	PwC	4/10/2022
A27	Blockchain & Digital Assets – Services + Law	4/10/2022
A28	Cartland Law	6/10/2022
A29	Society of Trust & Estate Practitioners Australia Pty Limited (STEP Australia) (note treat as same and additional to Cartland Law)	7/10/2022
A30	KPMG	7/10/2022
A31	Tech Council of Australia	7/10/2022
A32	Financial Services Council	10/10/2022
A33	Chartered Accountants Australia and New Zealand (CAANZ), CPA Australia (CPAA), Institute of Public Accountants (IPA), and the Tax Institute (Joint Bodies)	11/10/2022
A34	CONFIDENTIAL	31/10/2022
A35	NotCentralised and Australian DeFi Association	26/10/2022
A36	Blockchain Australia	21/10/2022
A37	Fintech Australia / King & Wood Mallesons	21/10/2022
A38	King & Wood Mallesons	28/10/2022
A39	Law Council of Australia	26/10/2022
A40	Law Institute of Victoria	20/10/2022
A41	Coinstash	16/10/2022

Public consultation meetings

The Board held a series of consultations throughout September and October 2022 attended by over 45 stakeholder groups representing the tax profession, academia, crypto exchanges and platforms, software providers and retail and wholesale investors.

International consultation

The Board has consulted extensively with international jurisdictions in accordance with its terms of reference, including targeted engagement with Canada, NZ, Singapore, UK and US.

Working group

The Board was supported by a Working Group to conduct the Review comprising Board members, officials from Treasury and the ATO, and the following specialists in taxation and digital assets across academia, the tax profession and the crypto asset industry:

Working Group Member	Organisation
Shane Brunette	Crypto Tax Calculator
Scott Chamberlain	Australian National University
Tracey Dunn	Ernst & Young
Julian Humphrey	KPMG
Mark Molesworth	BDO
Elizabeth Morton	RMIT University

Appendix B: Analysis of terms and conditions in pro-forma user contracts with Australian digital asset platforms

The legal rights (and therefore tax treatment) applying to crypto assets bought, sold and held by digital asset platforms will be affected by the terms of the contract between the particular exchange and their customers.⁷²³ The pro-forma contracts that Australian digital asset platforms offer to enter into with prospective customers are publicly available on their websites. The Board has undertaken an analysis of a selection of these publicly-available pro-forma contracts from which it has prepared the following overview of some general terms of various contracts, to give a general understanding of the rights, liabilities, disclosures and disclaimers involved.⁷²⁴

Relevant Terms and Conditions in User Contracts with Digital Asset Platforms	
Term	Detail
Definition of crypto asset	<p>A 'crypto asset' is a type of decentralised digital currency or asset which is not issued by any central bank or issuer. Technological encryption techniques are used to produce units of the currency or asset and verify the transfer of units between owners of the crypto asset.</p> <p>Crypto Asset means virtual, electronic or cryptographic currency, including tokens or blockchain assets, as may be added to or removed from the Platform from time to time in the digital asset platform's sole and absolute discretion. For the avoidance of doubt, a Crypto Asset does not include a Fiat Asset.</p>
Investor protection	<p>Since crypto assets markets are decentralised and non-regulated, crypto assets trading service is an unregulated service which is not governed by certain Australian regulatory frameworks. This means that there is no central bank that can issue more currency or take corrective measures to protect the value of crypto assets in a crisis.</p> <p>As crypto assets are unregulated, when you use the digital asset platform's assets trading service you will not benefit from the protections available to clients receiving regulated investment services. For example, you may not have access to Australian Financial Complaints Authority for dispute resolution.</p>

723 As was apparent in the NZ case concerning a custodial crypto exchange *Rusco v Cryptopia Limited (in liq)* [2020] NZHC 728; [2020] 2 NZLR 809 (Gendall J) – see Chapter 3.

724 As this is a compilation of terms in different contracts, no one term should be taken to be in all contracts – for example, a term stating that a trading platform is not an exchange would not appear in a contract with an entity that is an exchange.

Relevant Terms and Conditions in User Contracts with Digital Asset Platforms	
Term	Detail
Limitations to crypto assets trading service	This trading platform is not an exchange or a market. This means that you can only enter into crypto asset trades with us on the platform, and not with third parties. You will also not have the right to vote, stake (unless otherwise stated by us in accordance with 'Staking'), or otherwise participate in any events or actions that may occur in relation to the crypto asset. Therefore, services are limited to the customer buying and selling crypto assets on the platform.
Transfer of crypto assets	The crypto assets that are transferred to the customer's Wallet may not be transferred back to the customer's account, and the customer cannot exchange them for actual currencies (such as Australian Dollars, US Dollars or Sterling).
Risks of trading crypto assets	<p>Crypto assets are volatile virtual products and come with a high risk of losing money quickly. Prices can and do fluctuate significantly on any given day. Due to these price fluctuations, the customer's holdings may significantly increase or decrease in value at any given moment, and this may result in a loss of all the capital you have invested in a transaction.</p> <p>Crypto assets are often traded using independent blockchain technology. The customer's use of blockchain and other third-party networks will be subject to any changes and/or amendments in their systems and to any Applicable Law which may apply to them. We are not responsible for any failure, mistake, error, or breach of third-party networks.</p>
Staking	<p>As part of the Staking Service, we or any third-party appointed by us will stake certain Staked Crypto assets on the customers behalf, acting as a transaction validator on the applicable network. If we or anyone on the digital asset platform's behalf successfully validates a block of transactions using that Staked Crypto asset, a reward is granted by that crypto assets' network.</p> <p>You agree that we do not guarantee that we will distribute Staking Rewards to you, and that where we do so, the applicable percentage of Staking Rewards is set out at the digital asset platform's staking information page.</p>
Taxation	All amounts extracted from the customer's account are gross amounts, meaning that we have not collected, deducted, or paid any taxes for the customer or on the customer's behalf. It is the customer's responsibility to calculate and pay all applicable taxes that you owe as a result of the customer's trading activity on the platform. However, the digital asset platform may withhold and deduct at source any taxes due under Applicable Law at the digital asset platform's sole discretion.
Custody	Crypto assets are not regulated products and, therefore, trades or copy trades related to crypto assets are not subject to Applicable Law on custody. Any interest held by us in the crypto assets is hereby declared to be held on trust for the clients entitled to those crypto assets under these terms and is to be applied and dealt with by us in accordance with these terms.

Appendix C: ATO guidance products

The Board notes that the ATO have continued to develop new and refine existing guidance products, including throughout the period of the Board's Review. For the purposes of the Board's Report, the following crypto asset specific guidance products have been considered.

Binding public advice and guidance

Reference	Ruling Title	Issue date
<u>TD 2014/25</u>	Income tax: is bitcoin a 'foreign currency' for the purposes of Division 775 of the <i>Income Tax Assessment Act 1997</i> ?	17 December 2014
<u>TD 2014/26</u>	Income tax: is bitcoin a 'CGT asset' for the purposes of subsection 108-5(1) of the <i>Income Tax Assessment Act 1997</i> ?	17 December 2014
<u>TD 2014/27</u>	Income tax: is bitcoin trading stock for the purposes of subsection 70-10(1) of the <i>Income Tax Assessment Act 1997</i> ?	17 December 2014
<u>TD 2014/28</u>	Fringe benefits tax: is the provision of bitcoin by an employer to an employee in respect of their employment a property fringe benefit for the purposes of subsection 136(1) of the <i>Fringe Benefits Tax Assessment Act 1986</i> ?	17 December 2014

Published web guidance

Reference	Page title	Last updated
<u>QC 69945</u>	Crypto asset investments	
<u>QC 69946</u>	What are crypto assets?	30 June 2023
<u>QC 69947</u>	Transactions – acquiring and disposing of crypto assets	
<u>QC 69948</u>	<i>Crypto Asset Transactions</i>	30 June 2023
<u>QC 69949</u>	<i>Crypto to crypto exchange or swap</i>	30 June 2023
<u>QC 66097</u>	<i>Non-fungible tokens</i>	30 June 2023
<u>QC 69950</u>	<i>Staking rewards and airdrops</i>	30 June 2023
<u>QC 73646</u>	<i>Crypto asset transactions with gift cards or debit cards</i>	9 November 2023
<u>QC 73647</u>	<i>Crypto asset prizes and gambling winnings</i>	9 November 2023
<u>QC 69687</u>	<i>Gifts and donations of crypto assets</i>	30 June 2023

Reference	Page title	Last updated
QC 69951	<i>Loss or theft of crypto assets</i>	30 June 2023
QC 69952	How to work out and report CGT on crypto	30 June 2023
QC 69953	Crypto chain splits	30 June 2023
QC 69954	Crypto asset as a personal use asset	9 November 2023
QC 73649	Decentralised finance and wrapping crypto	9 November 2023
QC 69955	Keeping crypto records	30 June 2023
QC 69956	Crypto assets glossary	30 June 2023
QC 54800	SMSF investing in crypto assets	29 June 2022
QC 70925	Crypto assets and business	
QC 69963	Crypto assets used in business	29 June 2022
QC 70926	Crypto mining	18 November 2022
QC 65885	Crypto assets 2014–15 to 2022–23 data-matching program protocol	29 June 2022
N/A	Tax smart tips for your cryptocurrency investments	
QC 72970	GST and crypto assets	
QC 54048	GST and digital currency	5 July 2023
QC 72972	GST and digital currency as payment	5 July 2023
QC 72973	GST and trading digital currency	5 July 2023
QC 72974	GST and digital currency exchanges	5 July 2023
QC 67444	Crypto asset investments and tax	4 October 2022
QC 59553	Tax time toolkit for investors	2 June 2023
QC 70058	Taking the cryptic out of crypto this tax time	13 July 2022
QC 70025	Crypto myth busting with Tim Loh – interactive video transcript	7 July 2022

Edited private advice

The following list was compiled 9 January 2024 to identify edited private advice published on the ATO Legal Database using the search terms 'crypto', 'bitcoin' and 'cryptocurrency'. A selection of these rulings have been referenced throughout the Report.

Authorisation Number	Edited private advice title
5010050065720	2018 Income tax - assessable income - business and professional income - carrying on a business
1051458965822	2019 Application of Division 775 of the Income Tax Assessment Act 1997 (ITAA 1997) to a related party loan from an overseas company
5010056207480	2019 Capital gain on the sale of NewCoin
1051460118873	2019 Crypto currency and share investments
1051496792450	2019 Cryptocurrency
1051497886035	2019 Cryptocurrency
1051532082955	2019 Cryptocurrency
1051545007826	2019 Cryptocurrency
1051490734976	2019 Cryptocurrency – chainsplits – personal use asset
1051537413985	2019 Cryptocurrency – personal use
1051581160813	2019 Cryptocurrency – personal use
5010060075585	2019 Cryptocurrency – personal use
1051532101397	2019 Cryptocurrency – personal use – chain split
1051581846123	2019 Cryptocurrency – personal use – non-resident
5010056283062	2019 Cryptocurrency trading
5010055043639	2019 'Foreign currency' for the purposes of section 995-1 of the Income Tax Assessment Act 1997?
1051510404453	2019 Losses made from buying and selling cryptocurrency
1051427234585	2019 P3D Tokens
5010050043171	2019 Taxation of cryptocurrency
7915126463611	2019 Website forums
1051762426252	2020 Am I in business – cryptocurrency
1051670954247	2020 Cryptocurrency
1051694175099	2020 Cryptocurrency – non-fungible tokens
1051901680634	2021 Am I in business – cryptocurrency

Authorisation Number	Edited private advice title
1051893989711	2021 Capital gains tax
1051829318404	2021 Capital loss – cryptocurrency
1051843718359	2021 CGT – calculation of gains and losses
1051820739965	2021 CGT and cryptocurrency
1051833351244	2021 CGT and temporary resident
1051895820704	2021 CGT – personal use assets
1051781223882	2021 Cryptocurrency
1051859191291	2021 Cryptocurrency mining
1051899952747	2021 GST and cryptocurrency mining
1051882521018	2021 Investment schemes
1051818971620	2021 Residency
1051830752403	2021 Residency
1051896004231	2021 Residency
5010072631584	2021 Residency for taxation purposes
1051908361187	2022 Am I carrying on a business of cryptocurrency trading?
1051957252991	2022 Assessable income crypto assets
1051927830974	2022 Beneficial vs legal ownership
1051932249952	2022 CGT – cryptocurrency
1051918765366	2022 CGT – legal and beneficial ownership
1051961953605	2022 CGT – lending Ethereum (cryptocurrency) to a partnership
1051987284405	2022 Contracts for difference gains and losses
1051976096088	2022 Crypto assets – personal use
1052014880581	2022 Crypto mining and digital currency
1052016303269	2022 Crypto mining and digital currency
1052040568030	2022 Cryptocurrency – capital losses
1052012493751	2022 Cryptocurrency – disposal and acquisition
1052030474609	2022 Cryptocurrency – isolated transaction
1052013920611	2022 Cryptocurrency – profit making intention
1052045020286	2022 Cryptocurrency trading
1051911881194	2022 Cryptocurrency trading business
1052009342718	2022 Gifts of cryptocurrency to a deductible gift recipient via an intermediary

Authorisation Number	Edited private advice title
1052019397141	2022 GST and supply of non-fungible token
1052000336361	2022 GST consequences of using Tether as payment
1051934343575	2022 Income and capital
1052013877453	2022 Investment scam – capital loss
1051950624284	2022 Non-commercial losses – special circumstances
1051970191251	2022 Residency
1052019585347	2022 Self-education expenses
1051972615838	2022 TOFA – Division 230 ITAA1997 – cryptocurrency arbitrage function and investments and bullion investments
1052076027839	2023 Am I in business – hobby
1052153837920	2023 Am I in business? – cryptocurrency trading
1052190496758	2023 Assessable income – cryptocurrency
1052174024483	2023 Capital loss on cryptocurrency transactions
1052083464039	2023 CGT – cryptocurrency
1052041759482	2023 CGT – cryptocurrency – wrapped tokens
1052103982176	2023 CGT – small business concessions
1052178008218	2023 CGT – trust variations
1052180358143	2023 CGT asset – cryptocurrency
1052189290864	2023 CGT consequences for satisfying an unpaid present entitlement by converting it into a loan
1052036844823	2023 CGT event C1 – events giving rise to a roll-over – cryptocurrency
1052044328016	2023 Commissioner’s discretion – crypto trading
1052159589356	2023 Commissioner’s discretion – non-commercial loss
1052129517448	2023 Cryptocurrency
1052132552326	2023 Cryptocurrency
1052161070600	2023 Cryptocurrency
1052089379537	2023 Cryptocurrency – disposal and acquisition
1052069378645	2023 Cryptocurrency – investor v trader
1052152626256	2023 Cryptocurrency – trader or investor
1052116033924	2023 Cryptocurrency and temporary resident
1052095598784	2023 Cryptocurrency investment

Authorisation Number	Edited private advice title
1052108328158	2023 Cryptocurrency investment gains
1052126535535	2023 Cryptocurrency trading
1052114856163	2023 Cryptocurrency trading scam
1052119013740	2023 Deduction – stolen money
1052158518826	2023 Deductions for donations – valuing gifted property
1052116711454	2023 Derivative trading – deductibility of losses
1052178107870	2023 Eligible investment business
1052162005098	2023 GST registration and crypto asset trading
1052057728344	2023 Investor – cryptocurrency
1052070629264	2023 Non-commercial business losses
1052121287701	2023 Residency and GST
1052144901537	2023 Share and cryptocurrency trading
1052125946976	2023 Share trading
1052081360052	2023 Shares and cryptocurrency – trader or investor
1052193368728	2024 CGT – cryptocurrency
1052194347965	2024 Residency
1052194374222	2024 Residency
1052164031483	2024 Residency for taxation purposes and source of income

Appendix D: International jurisdiction responses to the Board's questions

The Board asked a set of ten questions to the revenue authorities of each of Canada, New Zealand, Singapore, United Kingdom and United States. The following table summarises their responses.

1. Do entities which carry on a business in relation to crypto assets or accept crypto assets as a form of payment, have a comprehensive awareness of the current (jurisdiction's) tax treatment of crypto assets and their tax obligations?				
Canada	New Zealand	Singapore	United Kingdom	United States
The CRA has provided clear communication in relation to cryptocurrency not being legal tender and the application of barter transaction rules but cannot comment on the general level of awareness of entities.	NZ IR is not aware of a significant portion of businesses accepting crypto assets as payment and provides specific guidance for businesses on its website to ensure an overall level of taxpayer awareness.	The IRAS carries out broad-based educational efforts including providing e-Tax Guides and website guidance that are regularly reviewed and updated on the general income tax and GST treatment and reporting requirements of transactions involving digital tokens.	HMRC has limited knowledge on this. No specific research has been undertaken. HMRC has undertaken some evidence gathering on behalf of the OECD, but it was focusing on their operations and the extent of crypto assets being used for payment.	The IRS provides guidance for businesses on its website. It is difficult for the IRS to gauge exactly the level of taxpayers' understanding regarding treatment and taxation of transactions in relation to crypto assets.

2. Are investors aware of the current (jurisdiction's) tax treatment of crypto assets? To what extent are they receiving professional tax advice?				
Canada	New Zealand	Singapore	United Kingdom	United States
<p>The CRA has provided clear guidance and communications on the tax consequences of crypto transactions. They are unable to gauge the extent of the use of tax professionals by investors for tax advice.</p>	<p>NZ IR provides website guidance on how crypto assets are taxed for individuals.</p> <p>Due to the complexity in calculating income tax liability on crypto asset disposals, adviser fees can sometimes be greater than the resulting tax liability.</p>	<p>IRAS' e-Tax Guides and website guidance contains information for investors. IRAS does not track the extent to which investors in crypto assets receive professional tax advice. They have observed that some of the more complex queries and private ruling requests received from businesses in relation to crypto assets are represented by tax agents.</p>	<p>HMRC has issued guidance detailing the tax treatment for individuals and businesses in relation crypto assets.</p> <p>HMRC has conducted research on individuals holding crypto assets and the results showed:</p> <ul style="list-style-type: none"> • 42% of crypto owners are aware that tax liabilities can arise when purchasing goods/services using crypto • 50% are aware that tax liabilities can arise when converting crypto assets into fiat currency • 28% seen HMRC guidance on crypto assets • 16% have sought tax advice • 59% of crypto asset owners know little or nothing about CGT. <p>HMRC has also conducted some face-to-face interviews.</p>	<p>The IRS provides guidance applicable for investors on its website. The extent of taxpayer awareness or use of professional tax advice is unknown.</p>

3. How should the tax transparency of crypto assets be improved, including what information tax administrators need to know about transactions for purposes of compliance and enforcement?

Canada	New Zealand	Singapore	United Kingdom	United States
<p>The CRA uses international engagement to share best practices with respect to stakeholder engagement and application of tax policy and strive to keep external guidance up to date. They are exploring options to improve reporting obligations of taxpayers and registrants.</p>	<p>80% of crypto asset activity undertaken by New Zealanders is carried out through offshore exchanges. NZ IR considers a multilateral solution to be the most effective way to improve visibility, particularly with reference to the information that will be gathered under the OECD's Crypto Asset Reporting Framework (CARF) requirements.</p>	<p>Taxpayers are required to keep proper records of transactions involving crypto assets and provide them to IRAS upon request. These records should include information such as the number of units of digital tokens received or sold, the value of the digital token, purpose of the transaction, details of customers and suppliers and receipts / invoices, amongst others. IRAS has published e-Tax Guides which details the record keeping requirements for taxpayers.</p>	<p>The UK Government announced in the Spring Budget on 15 March 2023 that a new section will be introduced to the Self-Assessment forms from 2024/2025 tax year so that gains from crypto assets will be identified separately on the forms.</p> <p>The OECD CARF will obligate reporting crypto asset service providers to report information regarding the transactions undertaken by crypto asset users to its relevant jurisdiction. Exchange of information also occurs through existing means.</p> <p>HMRC also has statutory information gathering powers which enables the collection of data from third parties.</p>	<p>The IRS uses third-party information reporting which generally leads to higher levels of taxpayer compliance as it is transparent to both the IRS and taxpayers and allows the IRS to identify taxpayers with digital asset transactions that may otherwise be difficult to discover.</p>

4. What data sources does the jurisdiction's revenue agency currently utilise to assist in compliance activities in relation to crypto transactions?

Canada	New Zealand	Singapore	United Kingdom	United States
<p>The CRA relies on a number of tools and numerous internal and external data sources to detect crypto asset activity and is used with other submitted data to determine a taxpayer's overall compliance profile.</p> <p>The CRA has increased its use of third-party information to address compliance in the crypto-asset sector. For example, the CRA utilises third-party requests (Unnamed Persons Requirements – UPRs) and has utilised these to require an exchange to identify users and their transactions.</p>	<p>NZ IR requests crypto asset data from the NZ-based exchanges/brokers and is in the process of refreshing these information requests. This data is used to identify customers that are not compliant with their taxation obligations.</p> <p>NZ IR has also received data from other jurisdictions under exchange of information.</p>	<p>IRAS currently relies mainly on publicly available information and information available to the government to identify taxpayers that may have derived taxable crypto transaction gains/profits. An educational approach is applied to GST crypto risks including publishing and engaging businesses and tax advisers on the common crypto transactions; and reviewing the GST treatment of complex transactions by way of private rulings.</p>	<p>Schedule 23 of the <i>Finance Act 2011</i> can be utilised to gather bulk information from crypto asset service providers.</p> <p>HMRC also has information gathering powers under the Schedule 36 <i>Finance Act 2008</i> which enables them to gather bulk data from a data holder should there be a significant tax risk. Schedule 36 also allows more detailed information gathering where there is an individual tax risk.</p>	<p>The IRS widely uses various data sources in general compliance activities which are applied to crypto asset compliance, including: federal, state and local interagency intelligence; information sharing with tax treaty partners, whistle-blowers and informants, Suspicious Activity Reports, and voluntary third-party reporting information.</p> <p>Additionally, other data sources are of particular use in digital asset transactions: yK1/CKGE⁷²⁵; geolocation tools; and blockchain intelligence.</p>

725 yK1 uses data from lodged forms to visually depict relationships and income/loss flow between payers and payees. It draws graphs of nodes and links to help visualise complex corporate and flow-through structures. CKGE provides investigators (Revenue Agents, Revenue Officers, Special Agents, etc.) means to visualise and explore graph connections between entities.

5. Are there intermediaries (such as exchanges) or data sources that play a role in the revenue agency's administration of the jurisdiction's taxation laws?

Canada	New Zealand	Singapore	United Kingdom	United States
<p>Taxpayers have record keeping requirements for transactions with exchanges and other intermediaries. The CRA is also able to make requests for account information to intermediaries, such as crypto asset exchanges (pursuant to tax legislation and treaties) and is able to issue UPRs on intermediaries located in Canada.</p>	<p>NZ IR engages with the crypto asset exchanges that operate in NZ and requests data from those exchanges.</p>	<p>Licensed digital payment token service providers are required to collect and keep their users' identification and transaction records and submit them to authorities when requested (regulated by the Monetary Authority of Singapore).</p> <p>The IRAS conducts regular environmental scanning and engagement with the industry association to understand the developments and update guidance for businesses where applicable.</p>	<p>As detailed above, HMRC uses statutory information power to request data from third-party including crypto service providers such as exchanges.</p>	<p>Businesses are required to file forms when payments of digital assets are made to employees, independent contractors, and others.</p> <p>The IRS Is developing rules for reporting of certain digital asset transactions by brokers.</p> <p>Intermediaries, including centralised exchanges, banks, and platforms, also provide the IRS summonsed information when requested.</p>

6. What channels and tools does the revenue agency use to engage with the crypto community and their advisers to build awareness in relation to taxation obligations?

Canada	New Zealand	Singapore	United Kingdom	United States
<p>The CRA utilises public opinion research, conferences, other direct engagements with the tax community and industry groups, its website on Canada.ca, and social media accounts.</p>	<p>NZ IR has regular conversations with the crypto asset exchanges which supports development of website guidance and helps NZ IR in understanding innovation.</p> <p>Additionally NZ IR has conversations with key crypto asset advisors which enables the Commissioner to understand compliance difficulties.</p> <p>NZ IR is also engaging with crypto software providers to better understand how those tools work and whether they meet NZ's taxation requirements.</p> <p>NZ IR is part of NZ cross-government discussion on crypto assets.</p>	<p>IRAS carries out broad-based educational efforts by providing e-Tax Guides and write-ups on its website.</p> <p>IRAS maintains regular communication channels with tax advisers and will consult industry players in the course of developing updated guidance for specific industries and IRAS's review on relevant tax treatments, if required.</p>	<p>HMRC has a range of mechanisms such as the following:</p> <ul style="list-style-type: none"> • Messages to tax agents/advisers and other communications campaigns. Crypto assets have featured in newsletters to tax agents and advisory bodies, as well as in a general communications campaign HMRC carried out to raise awareness of Self-Assessment obligations. • Issue of educational nudge letters to individuals who HMRC believe may own crypto assets. • Engagement with external stakeholders (industry, tax advisers, and rep bodies) through working group and industry roundtables. • Publication of detailed guidance setting out tax treatment for cryptoassets. • Launch of a crypto disclosure facility to encourage people to come forward on any unpaid crypto taxes. 	<p>The IRS uses website, press releases/ communication notices, attends speaking engagements, and presents at national tax conferences on issues regarding taxation of certain digital asset transactions.</p>

7. What additional support can be provided to the tax adviser community to assist them in advising their clients in relation to the tax treatment of crypto assets?

Canada	New Zealand	Singapore	United Kingdom	United States
<p>The CRA strives to keep open communication channels with the tax community and updates its guides and tax tips in a timely manner in order for the tax community to stay apprised of recent developments.</p> <p>Taxpayers and tax professionals can seek clarity on the application of the <i>Income Tax Act</i> and its Regulations to transactions involving crypto assets through the Income Tax Rulings Directorate (GST/HST Rulings Directorate for GST issues) or obtain a binding ruling for a fee.</p> <p>The CRA writes non-binding technical interpretations that provide general information on Canadian income tax law.</p>	<p>NZ IR has been involved in joint training sessions with Chartered Accountants Australia and New Zealand in respect of the taxation of crypto assets. NZ IR considers it very important to provide assistance and guidance to tax practitioners as they seek to upskill themselves in respect of crypto asset tax issues.</p>	<p>IRAS recognises tax agents as partners in administering the tax system and in facilitating tax compliance. IRAS has the Enhanced IRAS-Tax Agent Relationship Framework to support closer partnership and collaboration between tax agents and IRAS and partners with the Singapore Chartered Tax Professionals to improve industry standards, such as through regular dialogue sessions with tax advisers to discuss tax policies and issues.</p>	<p>HMRC undertakes the following:</p> <ul style="list-style-type: none"> • Regular engagement with working groups through roundtables. There are two stakeholder groups: one consists of the tax professionals who work in the crypto space and tax/accountancy bodies; and the second consists of industry participants such as software developers and intermediaries. • Publication of detailed guidance on the GOV.UK website. • Operation of a non-statutory clearance service where taxpayers and their advisers could seek formal written advice from HMRC relating to a specific transaction. • Customers and advisers can also contact HMRC via the general helpline and webchat for enquires. 	<p>The expansion of information reporting for digital assets also benefits taxpayers and tax advisers.</p> <p>The lack of information reporting makes it difficult for taxpayers to properly track and report their gains or losses. This gap is being filled in part by voluntary tax reporting to customers by some digital asset exchanges, and by digital advisers who charge for the preparation of tax information, illustrating the benefits of information reporting to taxpayers.</p>

8. What have been the greatest challenges for the revenue agency in relation to the taxation of crypto assets and their associated transactions?				
Canada	New Zealand	Singapore	United Kingdom	United States
<p>Factors that create tax compliance risks include:</p> <ul style="list-style-type: none"> pseudonymity of transactions; decentralised nature of crypto assets; borderless nature of crypto assets; and pace of innovation. 	<p>From a policy perspective the greatest challenges have been:</p> <ul style="list-style-type: none"> Uncertainty as to how existing categories of law apply to crypto assets. Lack of visibility over incomes derived through crypto assets. Compliance costs faced by taxpayers. <p>The primary risk being addressed by NZ IR in respect of crypto asset activities is the underreporting of taxable income in respect of those activities, arising from knowledge, difficulty, visibility and attitude gaps. NZ IR is working through addressing these compliance issues through education, data, interventions (including reviewing compliance tools and case work), upskilling and ensuring NZ IR can adapt the way they work.</p>	<p>One of the biggest challenges is understanding the developments in the industry in a timely matter and ensuring that tax treatments are regularly reviewed and updated.</p> <p>Specifically in the area of GST, the challenges thus far are:</p> <ul style="list-style-type: none"> definitional issues for crypto assets (particularly whether certain assets fall into the definition of digital payment tokens for GST application) accurately determining the belonging status (business establishment/ fixed establishment) of customers. 	<p>HMRC’s main concerns and drivers at the time of response centred around knowledge and data. For example:</p> <ul style="list-style-type: none"> Taxpayers not knowing what their tax obligations are. Taxpayers knowing what their obligations are but not complying (either deliberately or through misunderstanding of the rules). Taxpayers trying to comply but getting it wrong (due to complexity or lack of resources). <p>In addition, this can be intensified by the fast evolving nature of the technology and the complexity of the tax rules, making it challenging to apply existing tax rules in certain areas.</p>	<p>The greatest challenge for the IRS is that the distributed ledger record of transactions does not include the identity of the parties involved in the transactions. This anonymity creates a significant risk to tax administration.</p>

9. What steps have been or can be taken to address these challenges?				
Canada	New Zealand	Singapore	United Kingdom	United States
<p>One aspect of CRA's compliance strategy is data acquisition, with a focus on third-party data.</p> <p>The CRA engages with domestic and international stakeholders and continues to develop products in order to keep taxpayers informed of new trends and to establish a comprehensive approach to addressing potential non-compliance.</p>	<p>NZ IR's policy approach has been to identify the biggest pain points for taxpayers and legislate to provide certainty with respect to the uncertain application of existing laws to crypto assets. An example is the amendments enacted early 2022, retrospective to 2009, to exclude crypto assets from GST and NZ's financial arrangements rules.</p> <p>The implementation of the CARF will help address the lack of visibility over and support greater tax compliance.</p> <p>Subject to resourcing and prioritisation as part of NZ IR's tax policy work programme, NZ IR would like to explore simplified calculation methods for crypto assets or assist taxpayers in utilising software tools. NZ IR considers this would reduce compliance costs.</p>	<p>IRAS conducts regular environmental scanning and engagement with the industry association to understand the developments and update guidance for businesses where applicable.</p> <p>At the international level, if there can be guidance on proposed definitions, recommended GST treatment of the different classes of crypto assets and how the belonging status of customers can be accurately determined for crypto transactions, these would be helpful references.</p>	<p>HMRC is exploring possible ways to address these risks, for example:</p> <ul style="list-style-type: none"> improving their understanding of taxpayer's experiences through research in various forms; improving taxpayer education through updated guidance, communications and working with the private sector to deliver educational pieces; making it easier for taxpayers to comply with their obligation and harder to evade tax through improved compliance related data; and upskilling staff to be more confident in recognising and dealing with crypto asset related challenges. <p>In addition, they also aim to address issues as and when they emerge. For example, HMRC ran a call for evidence and consultation on the taxation of decentralised finance, with an aim of simplifying the tax rules applicable to these transactions.</p>	<p>The IRS notes that an information reporting regime requiring reporting to the IRS on digital asset transactions by brokers would benefit tax compliance by helping to close the information gap with respect to digital assets. Congress passed the <i>Infrastructure Investment and Jobs Act</i> in November 2021, which – once implementing regulations are finalised – will extend the information reporting rules to digital asset brokers. Once separate implementing regulations are proposed and finalised, this legislation will also require information reporting by persons operating trades or businesses that receive over USD 10,000 in cash, which for purposes of this rule only, includes digital assets.</p>

10. What aspects of taxing crypto assets have been managed successfully by the Revenue agency and the jurisdiction's Federal Government, and are there any particular features of the jurisdiction's tax system or its administration which have been particularly beneficial in relation to the taxation of crypto assets and their associated transactions?

Canada	New Zealand	Singapore	United Kingdom	United States
<p>The CRA has clearly communicated tax positions and developments to the community including that cryptocurrency is not legal tender and if it is used to pay for goods and services, the barter rules apply. Additionally, legislative amendments have addressed the GST/HST application of crypto asset transactions.</p> <p>The use of third-party requirements and exchange of information has been beneficial to the CRA in identifying potential non-compliant taxpayers and in understanding the tax gap in the crypto-asset space.</p>	<p>NZ IR considered that from a policy perspective, legislating to exclude crypto assets from GST and the financial arrangements rules was a significant success.</p> <p>Additionally, education is the key piece of work, which continues to evolve with the crypto asset ecosystem. Education needs to be supported with direct interventions for non-compliance and NZ IR is trying to be very targeted with this approach, including identifying a group of top crypto assets users/investors to use as a control group to understand crypto asset compliance and the flow-on effects of intervention on the wider crypto asset ecosystem.</p>	<p>IRAS regularly monitors and reviews the tax treatment in relation to digital tokens, and issues guidance published on its website. IRAS considers it important to provide certainty and clear rules without imposing onerous compliance burdens and stifling innovation.</p> <p>For GST purposes, changes made from January 2020 simplified the tax treatment and reduced the compliance burden for digital payment tokens with no GST to be collected on their sale/ use as payment. In addition, business who derive supplies solely from the exchange of digital payment token or use it as payment are exempted from the requirement to register for GST.</p>	<p>UK operates a Self-Assessment system for tax collection, such that taxpayers are responsible for completing a tax return each year if they need to, and for paying any tax due for that tax year.</p> <p>There have been the following successes and active pieces of work:</p> <ul style="list-style-type: none"> • Publication of market research into the crypto asset industry.⁷²⁶ • Publication of guidance, including on Decentralised Finance.⁷²⁷ • Announcement of Self-Assessment form changes, adding information on crypto assets as a unique asset of consideration.⁷²⁸ • Launch of crypto disclosure facility. 	<p>Successful management of digital asset taxation is yet to be able to be measured as the tax gap relative to digital asset activity is unknown. The IRS has seen an increase in the numbers of individuals who are checking the box on the front of the Form 1040 that was first established on Schedule 1 of 2019 Form 1040 to identify if they received or engaged in any transactions involving digital crypto assets during the year. However, the level of compliance of those who are not checking the box, and whether they have digital asset reportable transactions, is not known at the time of the IRS response.</p>

726 HM Revenue & Customs, Kantar Public, *Individuals holding cryptoassets: uptake and understanding* (Research Report No. 643, February 2022).

727 'Cryptoassets Manual', HM Revenue & Customs (Web Page, 21 August 2023).

728 HM Revenue & Customs, *Spring Budget 2023 – Overview of tax legislation and rates (OOTLAR)* (Policy Paper, 15 March 2023) [2.41].