Inquiry into the current and future nature, impact, and risks of cryptocurrencies

Report of the Finance and Expenditure Committee

August 2023

Contents

Ingrid Leary
Chairperson

Inquiry into the current and future nature, impact, and risks of cryptocurrencies

Recommendations

The Finance and Expenditure Committee has conducted an inquiry into the current and future nature, impact, and risks of cryptocurrencies, and recommends that the Government take note of and consider each of the following recommendations made by the independent advisers:

Policy settings

1. We recommend that the Government adopt policy settings to encourage developments in digital assets and blockchain in New Zealand.

Regulatory frameworks

2. Because it is early in the development of digital assets and blockchain, we recommend that the Government and regulatory agencies proceed carefully and do not design and implement a fully integrated and consistent regulatory framework for digital assets at this point in time. Instead, we recommend that problems are addressed as they arise. We recommend that the Government and regulators create coherent and consistent guidance on the treatment of digital assets under current law.

Regulation and resources to protect consumers in New Zealand

3. We recommend that the Government ensure that regulators (in particular, the Financial Markets Authority (FMA) and the Commerce Commission) are well resourced to deal with bad actors in the digital asset space, and ensure consumers have confidence interacting with digital assets, whether for investment, business, or enjoyment. Information on digital asset scams is made easily available.
4. We recommend that the digital assets industry in New Zealand, in consultation with regulators, develops a best practice code or guidance with minimum standards for the custody of digital assets.
5. We recommend that the Government direct the Ministry of Business, Innovation and Employment (MBIE), in consultation with the FMA and the industry, to use its regulation-making powers to add a defined class of digital assets which are used for investment purposes as a new category of "financial advice product" (but not, to be clear, a new "financial product") to bring them into the regulated financial advice and client money–client property services regimes.

Regulation to encourage industry growth

6. We recommend that the Government adopt a technologically neutral approach to regulation of the digital asset space, tailoring measures in relation to digital assets and related services and technology as required to deal with material risks associated with them.

7. We recommend that the Government direct the FMA (as lead agency) to establish a formal sandbox to allow organisations to test innovations in relation to digital assets and digital asset services. A formal sandbox signals that New Zealand is keen to facilitate the growth of this industry and would assist regulators' knowledge of the technology, developments, and ventures in this area.

Primary regulator role

8. We recommend that there should be no primary regulator for digital assets, as digital assets cover a spectrum of use cases, well beyond investment.
9. We recommend that the Government direct the FMA (as lead agency) to create a sub-committee of the Council of Financial Regulators for digital assets and virtual asset service providers, comprising a cross-agency team, including the present members (FMA, Reserve Bank of New Zealand, Commerce Commission, MBIE and the Treasury) and the Department of Internal Affairs (DIA). The group would be active and provide coordinated responses to issues facing the industry and contribute guidance and resource, and to the development of the industry in New Zealand.

Digital Assets Cross-Agency Working Group

10. We recommend that the Government direct the creation of a cross-agency working group (Digital Assets Cross-Agency Working Group) to lead the Government's work with the industry in developing a policy for digital assets in New Zealand. At a minimum, this should comprise members from the FMA, MBIE, DIA, the Treasury, Inland Revenue, the Ministry of Justice, the Government Communications Security Bureau (GCSB), the New Zealand Police's Financial Intelligence Unit, the Reserve Bank of New Zealand, and Callaghan Innovation. We recommend that the leadership (chair) of the Digital Assets Cross-Agency Working Group should rotate between the member agencies.

"Blockchain-sprints"

11. We recommend that the Digital Assets Cross-Agency Working Group hold "blockchain-sprint" equivalent or similar events to develop new ideas and strategies for industry growth.

Holding to account and assessment of progress

12. We recommend that the Government, via Callaghan Innovation, appoint an independent person or organisation to prepare a yearly report on the blockchain sector in New Zealand for the next six years.

Immigration

13. We recommend that the Government direct Immigration New Zealand and related departments, in consultation with industry, to continue to expand where necessary the skills shortages list to include persons with skills in the areas of digital assets and blockchain more generally.

Education

14. We recommend that secondary and tertiary educational institutions consider developing courses in relation to digital assets, blockchain, and the broader Web3

context, as part of a wider focus on technology (and its place in New Zealand's future).

15. We recommend that the Government and the digital assets industry in New Zealand develop training and educational resources, including:
    a) professional bodies, such as accountants and lawyers to ensure their members receive the necessary training in relation to blockchain and digital assets
    b) Te Kura Kaiwhakawā (Institute of Judicial Studies) to ensure that judges receive training in blockchain and digital assets
    c) training in blockchain and digital assets to be made available to government departments with a number of people within each agency receiving training
    d) financial dispute resolution schemes to train their staff in relation to disputes involving blockchain and digital assets.

Taxation

16. We recommend that Inland Revenue explore, in consultation with the digital assets industry in New Zealand, whether tax incentives for digital asset service providers are necessary or appropriate, in addition to continuing work to provide clarity around the treatment of digital assets within the tax system, to encourage investment of capital in New Zealand, as well as enhance the competitiveness of the New Zealand tax system.

Other legal issues

17. We recommend that MBIE explore whether a legislative intervention as proposed by the UK Law Commission in its initial consultation should be adopted in New Zealand to remove uncertainty through the creation of:
    a) a third category of personal property ("data assets")
    b) an innocent acquisition rule
    c) a general pro rata shortfall allocation rule for comingled holdings of crypto-tokens when a custodian becomes insolvent.

Anti-money laundering and countering financing of terrorism

18. In assessing its response to the issues raised in the Anti-Money Laundering and Countering Financing of Terrorism Act (AML/CFT Act) review, and in consultation with the proposed Digital Assets Cross-Agency Working Group and industry, we recommend that the Ministry of Justice's continuing process of amendments to the AML/CFT Act and regulations and guidance balances combatting genuine money-laundering and terrorism financing risks against the threats to innovation and industry of overly strict rules. Without an appropriate balance, overly strict rules threaten innovation and industry in New Zealand as businesses wishing to use digital assets (such as tokens) may relocate to other jurisdictions where rules are clearer or more light-touch.

    Clear territorial application rules are also needed to ensure cross-border commerce is easy for overseas businesses regulated for AML/CFT in their home jurisdictions, where those jurisdictions follow the same FATF principles as New Zealand.

Decentralised autonomous organisations (DAOs)

19. We recommend that the proposed Digital Assets Cross-Agency Working Group monitor closely international developments on the legal recognition and treatment of decentralised autonomous organisations (DAOs) and be ready to move quickly (as a "fast follower") if a consensus emerges. In the meantime, we recommend that regulators should (whether through a sandbox or otherwise) be patient and tolerant with industry "hacking" existing structures to explore the use cases for DAOs.

Access to banking services

20. We recommend that the Reserve Bank (either alone or as part of the Digital Assets Cross-Agency Working Group) develop a scheme for the New Zealand context to address due diligence requirements of banks to ensure organisations dealing with digital assets are able to access banking services.
21. For organisations found to have been improperly de-banked, we recommend that the Government ensure they can access banking services, whether through the bank found to have improperly de-banked them, or through a government-owned entity such as Kiwibank.

Central bank digital currency

22. We recommend that the Reserve Bank continue with design work on its central bank digital currency.

About our inquiry and this report

On 30 June 2021, we initiated an inquiry into the current and future nature, impacts, and risks of cryptocurrencies. Our inquiry was guided by the following terms of reference:

- To inquire into and establish the nature and benefits of cryptocurrencies:
    - To establish how cryptocurrencies are created and traded.
    - To understand the environmental impact of "mining" cryptocurrencies.
    - To identify risks to users and traders of cryptocurrencies.
- To identify the risks cryptocurrencies pose to monetary and financial stability, including tax implications, in New Zealand.
- To establish how cryptocurrencies are used by criminal organisations.
- To establish whether means exist to regulate cryptocurrencies, either by sovereign states, central banks, or multilateral cooperation.

We opened for submissions from the public on our inquiry and appointed independent advisers to advise us on the matter. The independent advisers considered written and oral evidence from submitters, and undertook extensive research into the current and future nature, impact, and risks of cryptocurrencies. They applied their findings to the New Zealand setting and produced a comprehensive report for us, which included 22 recommendations for our consideration.

We acknowledge that the environment in which cryptocurrencies operate is rapidly changing. It is a dynamic space, and things have changed since the independent advisers' report was finalised in October 2022. This may mean that some of the information from our inquiry and the independent advisers' report is now out of date. Nonetheless, we endorse the independent advisers' report—including the recommendations within it, which we have adopted and listed above—and have appended the report to this document.

The primary purpose of our report is to release the independent advisers' report to the general public to facilitate more public debate on these matters, and to prompt further consideration and work by the Government to ensure New Zealand is well placed to adapt to the opportunities, challenges, and risks associated with cryptocurrencies. We recommend to the Government that it consider all of the recommendations set out in the independent advisers' report. In addition to that report, we provide further comment below on several matters of particular interest to the committee.

New Zealand should adopt a more proactive approach to digital assets

Current approach of "wait and see"

New Zealand has to date employed a "wait and see" approach to regulating digital assets. This is not intended to be a critical term—this approach seeks to balance the risks and opportunities associated with emerging financial technologies against an underlying awareness of the speed of technical innovation and the associated need for regulators to develop their understanding of new products and approaches. As our independent advisers explain in their report:

> The "wait and see" approach involves not issuing specific regulation, including guidelines, on the digital asset industry to allow for its development. It usually combines existing laws and regulations with close monitoring, which leads to the timely development of a regulatory framework that addresses potential risks. Its aim is to avoid stifling innovation in the early stages, but to remain attentive and ready to act if and when required to preserve stability, among other needed variables.[1]

Taking a more proactive approach

The advisers' report makes a number of recommendations that, when taken together, would see New Zealand adopt a more proactive approach to the relationship between regulation and innovation. This is embodied in the advisers' first recommendation: that "the Government adopt policy settings to encourage developments in digital assets and blockchain in New Zealand". We support this recommendation, and are keen to see more work done within government to create a stronger foundation for innovation in the finance and technology sectors. Our inquiry highlighted for us that regulatory uncertainty can be a

[1] Independent advisers' report, para 172.

barrier to the development of new products and technological applications, or may encourage industry players that are less discerning about the legal status of their activities.[2]

The independent advisers' report does not recommend adopting a fully integrated regulatory system, but suggests that there is room for more consistent and informative guidance from government agencies about how existing legislation and regulatory rules apply to digital assets and associated technologies. The report also recommends a number of specific initiatives to facilitate more cross-agency collaboration, such as the creation of a Digital Assets Cross-Agency Working Group. Given that financial technology has many facets and involves a significant number of government agencies, we support taking a more structured approach to collaboration as a way of contributing to a better environment for innovation.

Overall, we believe there are significant opportunities for New Zealand to embrace. As noted in the advisers' report, other relevant jurisdictions "are actively working on encouraging developments in digital assets and blockchain",[3] and New Zealand's technology sector could miss the opportunities by taking too passive an approach. If the current "wait and see" approach remains, New Zealand risks missing out. As other jurisdictions evolve their regulatory settings and create incentives to encourage development and use of the technology, New Zealand may become an increasingly less attractive country in which to operate blockchain businesses or to deal with digital assets. This could result in skilled labour and innovators leaving New Zealand, and a reduction in the number of new ventures emerging. We consider that a more proactive approach would help to mitigate this.

There are, of course, risks as well. The advisers' report points out that many of these risks are associated with traditional technologies as well. Nonetheless, there are clearly unique features to digital assets, and the fact that other technologies are used for perverse means such as money-laundering or scamming people does not lessen our responsibility to minimise these outcomes as much as possible. We believe it is possible to do so while also improving the environment for innovation.

"Cryptocurrencies" is not necessarily the right term

Part two of the independent advisers' report sets out some of the definitional challenges with cryptocurrencies and the associated terrain of emerging financial technologies and products. There is considerable variety in the nature of these new products, and not all of them have the characteristics of "currencies" in the ordinary meaning of that word. The advisers' report therefore preferred to use the term "digital assets", which is more inclusive of this variety. The report explains that it uses the term "crypto asset" for cryptocurrencies, and "digital assets" for both cryptocurrencies and other assets that are secured and supported by blockchain technology, such as NFTs (non-fungible digital tokens).[4]

One of the themes highlighted in the advisers' report is the importance of increasing technical knowledge about digital assets and associated technologies among a range of relevant groups and professions—not least among policy-makers and regulators. We

2 Independent advisers' report, para 224.

3 Independent advisers' report, paras 273, 275–277.

4 Independent advisers' report, para 59(d).

discuss this further in the section titled “Adopting a “sandbox” policy”. We encourage interested readers to read the section on definitional challenges in the independent advisers’ report to better understand relevant terms. These include terms for different types of digital assets, but also their potential applications (such as “smart contracts”), and the technology that digital assets are based on (blockchain).[5]

We have adopted the advisers’ approach and refer to digital assets in the remainder of our report, unless the term cryptocurrency is more context-appropriate.

Digital assets and associated technologies are in use now and will continue to develop

The independent advisers’ report makes clear that digital assets and associated technologies are in use in many different contexts around the world, and they can be expected to continue developing into the future. Their potential applications and effects could be extensive, and they are the subject of considerable interest and, in some cases encouragement, internationally. In short, these are developments that New Zealand cannot choose to ignore. Current developments and products already interact with our existing legislative and regulatory frameworks. Moreover, digital assets and associated technologies may offer significant opportunities for New Zealand’s technology sector, which is New Zealand’s second-largest exporter.[6]

News stories about cryptocurrencies tend to focus on the large price fluctuations of certain cryptocurrencies such as Bitcoin, or high-profile crises such as the recent collapse of the FTX cryptocurrency exchange platform or regulatory challenges facing Binance, another large cryptocurrency exchange platform. These stories show some of the risks and challenges associated with digital assets, but they are not entirely representative of the relevance that digital assets and their associated technologies may have for New Zealand. We therefore consider it important for the Government to continue its work in this space, and for it to take a more proactive approach, which we discuss in the next section.

Adopting a “sandbox” policy

One way in which a more proactive approach could be taken is to adopt a sandbox policy. Regulatory sandboxes are a way to promote innovation and improve regulators’ understanding of emerging technologies and their potential applications. They involve innovators and regulators working alongside each other in a defined and limited space that is free from some existing rules, reducing the burdens of compliance and uncertainty while regulators maintain visibility over outcomes. This allows organisations to create and test new products and technological applications in an environment where regulatory protections for consumers can be balanced against encouragement to innovate. Because regulators work alongside innovators, regulators can increase their knowledge of relevant technologies and developments in the sector.

5 Independent advisers’ report, paras 56–95.

6 Independent advisers’ report, para 271.

A “sandbox” can mean different things to different people. The German Federal Ministry for Economic Affairs and Climate Action provides a good definition:[7]

> Regulatory sandboxes enable in a real-life environment the testing of innovative technologies, products, services or approaches, which are not fully compliant with the existing legal and regulatory framework. They are operated for a limited time and in a limited part of a sector or area. The purpose of regulatory sandboxes is to learn about the opportunities and risks that a particular innovation carries and to develop the right regulatory environment to accommodate it. Experimentation clauses are often the legal basis for regulatory sandboxes.

We believe there would be merit in New Zealand adopting a formal sandbox policy for digital assets and associated technologies. Apart from encouraging innovation, the sandbox approach can lead to evidence-based regulatory development by enhancing regulators’ knowledge of emerging technologies. Digital assets and associated technologies are good candidates for a sandbox approach because of their rapidly-evolving and relatively complex nature, and the challenges these may pose for regulators.

We note that regulatory sandboxes can present some challenges. Because they represent a relatively new approach, lessons are still being learned about the process itself. Innovators may also face uncertainty about what requirements will be in place once the sandbox has been disestablished, or once they leave it. In addition, because sandboxes operate on a restricted scale within a limited duration, innovators may find it challenging to test their products to scale and to undertake thorough testing before the sandbox’s deadline for disestablishment.

Nevertheless, some countries have found success in using regulatory sandboxes. The United Kingdom (UK) established a regulatory sandbox in 2016 for blockchain companies to test their innovations. By late 2021, the sandbox had supported 43 firms with blockchain or cryptocurrency innovations to undertake live market testing. Following this, the UK Government released a range of measures intended to help the UK become a global technology hub for digital assets. We note the success of the UK’s sandbox and consider that it offers valuable guidance into how a similar process could work in New Zealand.

We therefore recommend that the Government direct the FMA (as lead agency) to establish a formal sandbox, allowing organisations to test innovations in relation to digital assets and digital asset services. We believe it would demonstrate that New Zealand is keen to facilitate the growth of the digital assets industry and would assist regulators to develop their knowledge in this area.

Immigration

Another consideration to ensure a more proactive approach could be for Immigration New Zealand and any related departments, in consultation with industry, to expand the skills shortages list to include people with skills in the areas of digital assets and, more generally, blockchain. We note that, at the time the advisers’ report was finalised in October 2022, immigration settings were more restrictive because of the COVID-19 pandemic. Immigration

[7] https://www.bmwk.de/Redaktion/EN/Dossier/regulatory-sandboxes.html.

settings have since been updated, so we suggest this be taken into account during any consideration of this recommendation.

"Token Mapping" consultation paper

The Australian Treasury published a consultation paper on "token mapping" in February 2023, which was intended to help inform the Australian Government to put appropriate regulatory settings in place for cryptocurrencies. The paper defines token mapping as "the process of identifying the key activities and functions of products in the crypto ecosystem and mapping them against existing regulatory frameworks". To assist the digital assets industry, regulators, and consumers to navigate the ecosystem of cryptocurrencies, the paper explores key concepts needed as a foundation for understanding it. The paper also proposes a token mapping framework to support how cryptocurrency products could be arranged within Australia's existing regulatory frameworks.

The independent advisers' report does not recommend conducting a token mapping exercise in New Zealand, largely because New Zealand can benefit from the comprehensive work already done in Australia. We wish to bring the Government's attention to the Australian paper and encourage relevant agencies to familiarise themselves with its findings, and apply relevant lessons to their own work.

Concluding comments

The digital assets and related technologies industry is at a formative stage. We believe it has an exciting future. The report produced by our independent advisers highlights a wide range of benefits and challenges. There is significant opportunity for innovation in financial services, which can have application not only in commercial contexts but also social and environmental ones. However, there are also risks to be borne in mind, particularly around consumer protection.

We understand that the commercial opportunities that digital assets and related technologies offer may not be well understood by businesses and individuals, and that it may take some time for this understanding to grow as the industry develops over time. However, we think that the advisers have produced valuable evidence showing why New Zealand should take a more proactive approach. If New Zealand continues with its current approach of "wait and see", it risks stifling the digital assets and related technologies industry in the country. We intend to keep monitoring relevant developments in this space, including observing the Reserve Bank of New Zealand and its work on a potential central bank digital currency.[8]

We acknowledge that developments in cryptocurrencies are evolving rapidly, and so are the regulatory environments in which they operate. Some of the material in our independent advisers' report may now be out of date. Nevertheless, we believe that their research and analysis, and the evidence we received on the inquiry from our submitters, raise important

[8] Since 2021, the Reserve Bank has been exploring whether a central bank digital currency (CBDC) may be appropriate for New Zealand. CBDCs are digital money issued by central banks. In the same manner as cash, CBDCs represent a legal claim on central banks. You can read more about the potential for a CBDC in New Zealand on the Reserve Bank's website.

matters about the future of digital assets and blockchain in New Zealand. We thank our independent advisers and submitters for their input. We highly encourage our readers to explore the recommendations set out by our advisers and look forward to considering the Government's response to our recommendations when it becomes available.

Appendix A—Committee procedure

Committee procedure

We met between 30 June 2021 and 16 August 2023 to consider the inquiry. We called for public submissions with a closing date of 2 September 2021. We received submissions from 263 organisations and individuals and heard oral evidence from 18 submitters, via videoconference.

We received advice from our independent specialist advisers, Jeremy Muir and Alexandra Sims.

Committee members

Ingrid Leary (Chairperson)
Andrew Bayly
Hon Dr David Clark
Anna Lorck
Dan Rosewarne
Damien Smith
Chlöe Swarbrick
Hon Phil Twyford
Simon Watts
Helen White
Nicola Willis

Advice and evidence received

The documents we received as advice and evidence for this inquiry are available on the Parliament website, www.parliament.nz.

Recordings of our hearings can be accessed online at the following links:

- Hearing of evidence 8 September 2021
- Hearing of evidence 22 September 2021
- Hearing of evidence 29 September 2021
- Hearing of evidence 29 September 2021.

Appendix B—Independent advisers' report

We attach the report, *Inquiry into the current and future nature, impacts, and risks of cryptocurrencies,* prepared by our independent advisers Jeremy Muir (Partner, MinterEllisonRuddWatts) and Alexandra Sims (Associate Professor, Commercial Law, University of Auckland).

Inquiry into the current and future nature, impact, and risks of cryptocurrencies

Final Advisers' Report to the Finance and Expenditure Committee

28 October 2022
Updated in part, 9 August 2023

Advisers

Jeremy Muir
Partner, MinterEllisonRuddWatts
T +64 9 353 9819 M +64 21 625 319
jeremy.muir@minterellison.co.nz

Alexandra Sims
Associate Professor, Commercial Law
T +64 9 923 4901
a.sims@auckland.ac.nz

Executive summary

This report provides the Finance and Expenditure Select Committee (Committee) with:

- a summary of the submissions received as part of the inquiry into the current and future nature, impact, and risks of cryptocurrencies being conducted by the Committee;
- a summary of the global and New Zealand industry, key issues in relation to, and current New Zealand and international regulatory approaches to, cryptocurrency, digital assets, and blockchain; and
- advice and recommendations from the Advisers to assist the Committee in its deliberations.

Our report was originally given as at 28 October 2022. At the request of the Committee, we have lightly updated certain aspects as at 9 August 2023, where changes are relevant to our recommendations. The survey of developments in New Zealand and in other jurisdictions, for example, has not been comprehensively brought up to date.

Our view

Cryptocurrencies (and other digital assets) and the technology they use, blockchain technology, offer opportunities as well as challenges for New Zealand.

Blockchain technology's impact and its opportunities are being compared with those of the internet. Marc Andresson—a co-author of Mosaic, the first widely used Web browser—describes blockchain technology as "*the other half of the internet that we didn't know how to build when we built the first half.*"[1] Yet, as Andresson observes, blockchain technology is still in the early stages of a long process:[2]

> *[blockchain] is a foundational technology change, a new architecture for building an entirely new generation of computing systems. We have become convinced that Web3/blockchain/crypto is foundational. It's a big hill. It's as foundational an architecture shift as the ones from mainframes to PCs, from PCs to web, from web to mobile, or from traditional software to AI. It's a fundamental shift and building this out is a 25- to 30-year process*

The Government is acutely aware of the need for New Zealand businesses and people to engage and flourish in the digital age. The purpose of *Te Rautaki Matihikomō Aotearoa*/*The Digital Strategy for Aotearoa* (the **Digital Strategy**) is to enable "*Aotearoa New Zealand's people, communities, economy, and environment to flourish and prosper in the digital era*." [3] While the Digital Strategy does not focus on the development or implementation of specific technologies, blockchain is named as an example of specific digital technology.[4]

Many countries, recognising the opportunities that cryptocurrencies and blockchain represent, are actively working on legislative and other actions. In Australia, the Select Committee on Australia as a Technology and Financial Centre (**the Australian Select Committee**)[5] has recognised the "*tremendous potential of blockchain technology*" and made wide ranging recommendations that the Australian government is implementing. This report recommends that the New Zealand Government adopt and implement some of the Australian Select Committee's recommendations.

---

[1] https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/find-the-smartest-technologist-in-the-company-and-make-them-ceo.

[2] Ibid.

[3] https://www.digital.govt.nz/digital-government/strategy/digital-strategy-for-aotearoa-and-action-plan/the-digital-strategy-for-aotearoa/#:~:text=The%20Digital%20Strategy%20for%20Aotearoa%20has%20been%20built%20around%203,supported%20by%20goals%20and%20measures.

[4] Ibid at page 43.

[5] https://parlinfo.aph.gov.au/parlInfo/download/committees/reportsen/024747/toc_pdf/Finalreport.pdf;fileType=application%2Fpdf.

As in many areas, New Zealand has produced some successful blockchain businesses, which are expanding globally as technology is a weightless export. As one submitter to the Inquiry, technology entrepreneur and investor Jonty Kelt, commented:

> *The New Zealand technology industry has come a long way and has positive momentum. More recently, an ecosystem of cryptocurrency entrepreneurs and startups have coalesced here. I believe these New Zealand cryptocurrency companies can participate in the next 'web3' phase of global internet disruption and as such the government can play a role in providing the right conditions to enable them to achieve their potential, for the economic benefit of New Zealand and New Zealanders*

Blockchain technology, however, has its challenges and risks, which this Report addresses. The biggest challenge for New Zealand is, in our view, the risk of not encouraging and facilitating the genuine commercial use of cryptocurrencies, digital assets and blockchain in New Zealand. New Zealand must look to fulfil the Digital Strategy's purpose of enabling New Zealanders to flourish and prosper in the digital age.

Other challenges include the volatile price of cryptocurrencies, the environmental impact of cryptocurrencies and their use by criminals, whether this to launder money, fund terrorism or to carry out scams on innocent businesses and people. While, the challenges are real, the nature of the challenges is nuanced:

- **The volatile price of cryptocurrency** – the price of some cryptocurrencies, such as bitcoin, is volatile and many people have lost money through purchasing them. Such volatility is also often cited as a reason why cryptocurrencies are not suitable for payments. However, while the price of many cryptocurrencies fluctuates, not all do so. Increasingly stablecoins — cryptocurrencies that are designed to remain stable in price and are often pegged to currencies such as the US or NZ dollar — are being used.

- **Environmental impact** – some blockchains, such as Bitcoin and its cryptocurrency bitcoin, use significant amounts of electricity due to their use of "proof-of-work" consensus, which depending on where the mining occurs, can use fossil fuels. Yet most blockchains and, therefore, cryptocurrencies do not use proof-of-work. In particular, Ethereum, a commonly used blockchain, especially for non-fungible tokens (NFTs), has moved from proof-of-work to the less energy-intensive "proof-of-stake". In addition, developments in Bitcoin, such as the Lightning Network, mean that bitcoin transactions can be made with an environmental footprint smaller than traditional payment systems.

- **Criminal usage** – criminals can and have used cryptocurrencies for illegal purposes. However, just as most payments through our current payment systems are for legitimate and law-abiding purposes, most cryptocurrency payments are also for legal purposes. The use of blockchain technology can aid law enforcement as it often provides more transparency and visibility of payments than current payment systems. Scams involving cryptocurrencies are certainly an issue, yet there as many scams, if not more, which have no association with cryptocurrencies.

The borderless nature of digital technology is a significant and often overlooked challenge. Restricting the use of cryptocurrencies and other uses of blockchain technology by businesses based in New Zealand, would not automatically protect New Zealanders from harm. New Zealanders would still be targeted by scammers. Because many New Zealanders will want to engage with cryptocurrencies and blockchain, they will be more likely to use services located overseas due to the paucity of New Zealand offerings. In addition, restricting the ability of New Zealand based businesses to accept payments for goods and services in cryptocurrency will reduce the viability and competitiveness of such businesses as purchasers increasingly make payments in cryptocurrencies.

Continuing with the current hands-off approach to regulation and support is unlikely to increase the number of New Zealand blockchain businesses. As other jurisdictions work to change their regulatory settings and incentives to encourage the development and use of the technology, New Zealand becomes an increasingly less attractive country in which to operate. This may be the case whether creating a business from scratch, expanding operations into New Zealand by setting up a subsidiary or branch, or even enabling New Zealand citizens to use their services.

This Report advises that the correct approach is to facilitate the growth of reputable and trustworthy New Zealand blockchain businesses, through a range of measures. This approach will reduce the likelihood of

harm as New Zealanders are more likely to use locally based businesses. Other benefits include increasing the employment in New Zealand in high paying tech jobs and the organisations servicing those businesses, as well as increasing New Zealand's tax revenue. This must, of course, be balanced by enhancing the understanding and resources of our regulators to deal with scams and other consumer protection issues, and by educating the public in relation to digital assets generally.

There is no easy path to doing these things in relation to a fast-moving and multi-faceted technology such as blockchain. Many of our recommendations, therefore, focus on key institutions and groups working together to learn and move from guidance to rules over time. For example, we recommend the creation of a cross-agency working group comprising members from different parts of the public sector to lead the Government's work with industry in the development of policy for digital assets in New Zealand. We also recommend creation of a regulatory sandbox, where innovators can develop new ideas and products while regulators learn alongside them. Our recommendations are, equally, light on "quick fix" new legislation which is likely to become out-of-date by the time it is enacted.

Recommendations

We set out below our recommendations for the Committee to consider as part of developing its report. We have focussed the recommendations on the key policy design aspects of New Zealand's approach to regulation of cryptocurrencies that would require decisions before progressing.

The Advisers recommend the Committee consider the following:

Regulation

Should policy settings be neutral, encourage developments, or attempt to restrict developments in digital assets and blockchain in New Zealand?

Recommendation #1
We recommend that the Government adopt policy settings to encourage developments in digital assets and blockchain in New Zealand.

Does New Zealand need to urgently design and implement an integrated regulatory framework for digital assets?

Recommendation #2
Because it is early in the development of digital assets and blockchain, we recommend that the Government and regulatory agencies proceed carefully and do not design and implement a fully integrated and consistent regulatory framework for digital assets at this point in time. Instead, we recommend that problems are addressed as they arise. We recommend that the Government and regulators create coherent and consistent guidance on the treatment of digital assets under current law.

Regulation and resources to protect consumers in New Zealand

Recommendation #3
We recommend that the Government ensure that regulators (in particular, the Financial Markets Authority (**FMA**) and the Commerce Commission) are well resourced to deal with bad actors in the digital asset space, and ensure consumers have confidence interacting with digital assets, whether for investment, business, or enjoyment. Information on digital asset scams is easily available.
Recommendation #4
We recommend that the digital assets industry in New Zealand, in consultation with regulators, develops a best practice code or guidance with minimum standards for the custody of digital assets.
Recommendation #5
We recommend that the Government direct the Ministry of Business, Innovation and Employment (**MBIE**), in consultation with the FMA and the industry, to use its regulation-making powers to add a defined class of digital assets which are used for investment purposes as a new category of "financial advice product" (but not, to be clear, a new "financial product") to bring them into the regulated financial advice and client money–client property services regimes.

Regulation to encourage growth of industry

Recommendation #6
We recommend that the Government adopt a technologically neutral approach to regulation of the digital asset space, tailoring measures in relation to digital assets and related services and technology as required to deal with material risks associated with them.
Recommendation #7
We recommend that the Government direct the FMA (as lead agency) to establish a formal sandbox to allow organisations to test innovations in relation to digital assets and digital asset services. A formal sandbox signals that New Zealand is keen to facilitate the growth of this industry and would assist regulators' knowledge of the technology, developments and ventures in this area.

Which agency/ies should have the primary regulatory role(s)?

Recommendation #8
We recommend that there should be no single primary *regulator* for digital assets, as digital assets cover a spectrum of use cases, well beyond investment.
Recommendation #9
We recommend that the Government direct the FMA (as lead agency) to create a sub-committee of the Council of Financial Regulators[6] for digital assets and virtual asset service providers, comprising a cross-agency team, including the present members (FMA, Reserve Bank of New Zealand, Commerce Commission, MBIE, and the Treasury) and the Department of Internal Affairs (**DIA**). The group would be active and provide coordinated responses to issues facing the industry and contribute guidance and resource, and to the development of the industry in New Zealand.

[6] https://www.cofr.govt.nz/about-us/index.htm.

Industry support and development

Digital Assets Cross-Agency Working Group

Recommendation #10
We recommend that the Government direct the creation of a cross-agency working group (**Digital Assets Cross-Agency Working Group**) to lead the Government's work with industry in the development of policy for digital assets in New Zealand. At a minimum, this should comprise members from the FMA, MBIE, DIA, the Treasury, Inland Revenue, the Ministry of Justice, the Government Communications Security Bureau (**GCSB**), the New Zealand Police's Financial Intelligence Unit, the Reserve Bank of New Zealand, and Callaghan Innovation. We recommend that the leadership (chair) of the Digital Assets Cross-Agency Working Group should rotate between the member agencies.

'Blockchain-sprints'

Recommendation #11
We recommend that the Digital Assets Cross-Agency Working Group hold "blockchain-sprint" equivalent or similar events to develop new ideas and strategies for industry growth.

Holding to account and assessment of progress

Recommendation #12
We recommend that the Government, via Callaghan Innovation, appoint an independent person or organisation to prepare a yearly report on the blockchain sector in New Zealand for the next six years.

Immigration

Recommendation #13
We recommend that the Government direct Immigration New Zealand and related departments, in consultation with industry, to continue to expand where necessary the skills shortages list to include persons with skills in the areas of digital assets and blockchain more generally.

Education

Recommendation #14
We recommend that secondary and tertiary educational institutions consider development of courses in relation to digital assets, blockchain and the broader Web3 context, as part of a wider focus on technology (and its place in New Zealand's future).

Recommendation #15
We recommend that the Government and the digital assets industry in New Zealand develop training and educational resources, including: (a) professional bodies, such as accountants and lawyers to ensure their members receive the necessary training in relation to blockchain and digital assets; (b) Te Kura Kaiwhakawā (Institute of Judicial Studies) to ensure that judges receive training in blockchain and digital assets; (c) training in blockchain and digital assets to be made available to Government departments with a number of people within each agency receiving training; and (d) financial dispute resolution schemes to train their staff in relation to disputes involving blockchain and digital assets.

Taxation

Recommendation #16
We recommend that Inland Revenue explore, in consultation with the digital assets industry in New Zealand, whether tax incentives for digital asset service providers are necessary or appropriate, in addition to continuing work to provide clarity around the treatment of digital assets within the tax system, to encourage investment of capital in New Zealand, as well as enhance the competitiveness of the New Zealand tax system.

Other legal issues

Property law

Recommendation #17
We recommend that MBIE explore whether a legislative intervention as proposed by the UK Law Commission in its initial consultation should be adopted in New Zealand to remove uncertainty through the creation of: (a) a third category of personal property (“data assets”); (b) an innocent acquisition rule; and (c) a general pro rata shortfall allocation rule for comingled holdings of crypto-tokens when a custodian becomes insolvent.

Anti-money laundering and countering financing of terrorism

Recommendation #18
In assessing its response to the issues raised in the Anti-Money Laundering and Countering Financing of Terrorism Act (**AML/CFT Act**) review, and in consultation with the proposed Digital Assets Cross-Agency Working Group and industry, we recommend that the Ministry of Justice's continuing process of amendments to the AML/CFT Act and regulations and guidance balances combatting genuine money-laundering and terrorism financing risks against the threats to innovation and industry of overly strict rules. Without an appropriate balance, overly strict rules threaten innovation and industry in New Zealand as businesses wishing to use digital assets (such as tokens) may relocate to other jurisdictions where rules are clearer or more light-touch. Clear territorial application rules are also needed to ensure cross-border commerce is easy for overseas businesses regulated for AML/CFT in their home jurisdictions, where those jurisdictions follow the same FATF principles as New Zealand.

Decentralised autonomous organisations (DAOs)

Recommendation #19
We recommend that the proposed Digital Assets Cross-Agency Working Group monitor closely international developments on the legal recognition and treatment of decentralised autonomous organisations (**DAOs**) and be ready to move quickly (as a "fast follower") if a consensus emerges. In the meantime, we recommend that regulators should (whether through a sandbox or otherwise) be patient and tolerant with industry "hacking" existing structures to explore the use cases for DAOs.

Access to banking services

Recommendation #20
We recommend that the Reserve Bank (either alone or as part of the Digital Assets Cross-Agency Working Group) develop a scheme for the New Zealand context to address due diligence requirements of banks to ensure organisations dealing with digital assets are able to access banking services.
Recommendation #21
For organisations found to have been improperly de-banked, we recommend that the Government ensures they can access banking services, whether through the bank found to have improperly de-banked them, or through a government-owned entity such as Kiwibank.

Central bank digital currency

Recommendation #22
We recommend that the Reserve Bank continue with its CBDC design work.

Contents Page

Part 1: Introductory material

Scope of report

2. The Advisers consider that the terms of the inquiry were narrow and, as a number of submissions point out, there are other related issues that require attention. It does not make sense to consider cryptocurrencies in isolation, outside of their context as digital assets.

3. This report is structured in three parts:

   (a) Part One provides background to the terms of inquiry and a summary of the public submissions received in response to the inquiry. It also sets out a series of recommendations that the Committee might like to consider.

   (b) Part Two canvasses related concepts and key issues on cryptocurrencies, digital assets, and blockchain. It also provides an overview of global and New Zealand examples and current approaches to regulation, in these areas.

   (c) Part Three sets out the Advisers' recommendations and suggestions for the Committee to consider in response to inquiry and points raised by the submissions.

Limitations of report

4. As already noted, this area cannot necessarily be simply narrowed down to cryptocurrencies (as the terms of inquiry suggest). Many concepts are fundamental and linked to the issue of cryptocurrencies. The Advisers have discussed additional concepts in relation to digital assets and blockchain they consider to be of the most relevance to the Committee but there may be others that have not been captured in this report.

5. The Advisers also note that topics discussed in this report are rapidly evolving and therefore aspects of it may become obsolete at the time of reading. It is the Advisers' recommendation that in relying on parts of this report, the Committee be prudent in checking more recent developments in the area.

6. This report is not intended to be legal advice to any person and should not be relied upon as legal advice in relation to any jurisdictions discussed as well. Statements or summaries in relation to the law of any other jurisdiction are impressionistic and have not been verified or checked with local counsel.

Terms of reference

7. The Committee recognises that cryptocurrencies are relatively new, and they are emerging as an increasingly important part of the global and domestic financial system. In response, the Committee conducted an inquiry into the current and future nature, impact, and risks of cryptocurrencies and called for public submissions between 23 July 2021 to 2 September 2021 on this topic.

8. The terms of reference for the Committee's inquiry are:

   (a) to inquire into, and establish the nature and benefits of cryptocurrencies:

      (i) to establish how cryptocurrencies are created and traded

      (ii) to understand the environmental impact of 'mining' cryptocurrencies; and

      (iii) to identify risks to users and traders of cryptocurrencies;

   (b) to identify the risks cryptocurrencies pose to the monetary system and financial stability, including tax implications, in New Zealand;

   (c) to establish how cryptocurrencies are used by criminal organisations; and

(d) to establish whether means exist to regulate cryptocurrencies, either by sovereign states, central banks, or multi-lateral co-operation.

Terminology issues

9. The terminology in this area is not concrete and various combinations of words are used synonymously to refer to "cryptocurrencies". Among other things, cryptocurrencies have been referred to as digital assets, cryptoassets (or variations like crypto-assets or crypto assets), digital currency, or virtual currency.

10. This was also apparent in submissions to the Committee by three key New Zealand regulators.

11. In its submission to the Committee, the Reserve Bank of New Zealand (**RBNZ**) considered the term "crypto-assets" more appropriate than "crypto-currencies", stating:[7]

> *"…the Reserve Bank prefers not to use the term 'crypto-currency' as it implies attributes – a safe store of value, a stable medium of exchange and a reliable unit of account – associated with conventional currencies that 'crypto-currencies' do not have."*

12. In contrast, the Financial Markets Authority (**FMA**) submitted that *"[a] cryptocurrency is a form of 'digital' asset"*, specifically a *"crypto asset [that] is primarily used as a 'store of value', 'means of exchange' or 'unit of value'…"*. The FMA proceeded to describe the following different classes of assets: [8]

    (a) traditional assets tend to fall into three categories (capital assets, consumable assets, store of value assets) based on certain characteristics;

    (b) digital (or virtual assets) are digital representations of tangible or intangible assets, stored online in digital wallets, with the ability to record and transfer ownership in real-time (particularly if it's on a distributed ledger); and

    (c) crypto-assets are a subset of digital assets that utilise cryptography to create representative tokens.

13. The Inland Revenue Department (**IRD**) guidance acknowledges there is *"no standard terminology used"*,[9] but:

    (a) uses "cryptoassets" as synonymous with cryptocurrencies, cryptographic assets, digital financial assets, digital tokens, and virtual currencies; and

    (b) acknowledges a wide range of cryptocurrencies exist, including payment tokens,[10] security tokens,[11] and utility tokens.[12]

14. For the purposes of this report, we prefer to use the terminology adopted by the FMA i.e. digital assets, as the umbrella term. "Cryptocurrencies" are treated as a subset of digital assets. However, where we describe submissions, we use the terminology used in the submissions.

---

[7] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2044/e638a91cd4342b9777637d4f81bcd9ef99d4a47d at [3.1].

[8] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2009/1d0aaf2e5df1bffb6f4ead2e4c1c3d61d758b1df at pages 8 and 9.

[9] https://www.ird.govt.nz/cryptoassets/about.

[10] IRD notes that crypto-assets that are intended to be a means of payment or exchange, for example Bitcoin and Litecoin, are often called payment tokens, exchange tokens, intrinsic tokens or simply cryptocurrencies.

[11] IRD notes that crypto-assets that represent existing property or financial assets, and so mirror securities like shares or debt, are often called security or asset tokens.

[12] IRD notes that crypto-assets that are more like traditional payment vouchers are often called utility tokens because they can be used to gain direct access to specified goods or services.

Themes from submissions

15. This section provides more detail on the public submissions (written and oral) received and heard by the Committee in response to the terms of reference for this inquiry.

16. 263 submissions were received in response to the terms of inquiry. The submitters' names are set out in Appendix 1.

17. Submissions were received from individuals, digital asset businesses, and organisations supporting them, such as law firms, and a range of other organisations including government departments. The majority of submissions responded to the inquiry with generally positive views in relation to cryptocurrencies.

18. At a high-level, the submissions included the following main themes:

    (a) the terms of inquiry were negatively biased;

    (b) cryptocurrencies to be considered in the wider context of blockchain and digital assets;

    (c) opportunities in cryptocurrencies, digital assets, and blockchain as a weightless export for New Zealand;

    (d) opportunities for the use of cryptocurrencies in social impact projects;

    (e) tax issues around cryptocurrencies and digital assets;

    (f) regulatory uncertainty;

    (g) the need for government to collaborate with industry and experts in development of regulation;

    (h) concern over consumer protection;

    (i) concern over potential use in criminal activity;

    (j) the environment impact of some cryptocurrencies;

    (k) access to banking services; and

    (l) the need for education for consumers, government and other stakeholders.

19. We briefly summarise each of these themes below.

The terms of inquiry were negatively biased

20. Some submissions considered that the wording of the terms of reference of the inquiry was biased and framed negatively as the focus was on the risks and with little or no consideration of potential benefits.

21. The submitters that were critical of the perceived negative bias of the terms of reference, as well as other submitters, provided information in relation to the benefits of their digital asset ventures.

Cryptocurrencies to be considered in the wider context of blockchain and digital assets

22. Several submissions pointed out that cryptocurrency must be understood as only one of the many types of applications of blockchain and distributed ledger technology. Submitters suggested that to understand cryptocurrencies and their risks and opportunities, the Committee must first understand the underlying technology behind digital assets as wells as its uses beyond cryptocurrencies.

23. In particular, some submitters encouraged the Committee and policymakers in their work on the inquiry to acknowledge any biases they may have in respect of the emerging technology sector and to be careful to not adopt a broad-brush approach that could damage innovation in an unintended way.

Opportunities – weightless export

24. Many submitters considered that cryptocurrencies, digital assets and blockchain service could function as a weightless export for New Zealand, leading to the creation of high-paying and high-skilled jobs.

25. OnFinality's submission addressed the issue of weightless exports for New Zealand. OnFinality is a technology company based in Auckland that provides infrastructure services to the blockchain community around the world, describing itself as "*an export orientated company from incorporation*" that thrived during the pandemic because it embraced decentralised technology.

26. OnFinality, echoing the sentiments of other submissions, submitted that it:[13]

> *… welcomes policies that clarify the regulations around the handling of cryptocurrencies, but also encourages more New Zealand organisations to enter the growing industry and export weightless products and services to the entire world. We are losing ground to other territories that have moved quicker with legislation, including Singapore and Estonia. Many organisations have domiciled themselves there in order to gain legal clarity and certainty.*
>
> *There is concern that unless New Zealand introduces similarly transparent and robust laws around cryptocurrencies, our country will see a migration of talent, intellectual property, and economic benefits to overseas territories. Conversely, we would welcome partnership between the Government and the New Zealand blockchain industry to unlock skills and training opportunities for high-paying export-facing jobs that can be performed from any region in New Zealand.*
>
> *….*
>
> *There is an opportunity here for a progressive stance that could attract significant international investment and job opportunities for New Zealanders.*

Opportunities – social impact

27. Some submissions highlighted the positive social impact of cryptocurrencies and blockchain. Simon Mackenzie captures the essence of other submissions on this point:[14]

> *…there are a lot of visionary and potentially socially useful projects being built with blockchain technology, so crypto trading is not only about quick-win gambling style financial speculation it is also, in many cases, about early investment in technology projects that may be transformative. This kind of support for socially and economically progressive development should be encouraged, or at least not actively discouraged.*

28. Examples that submitters provided for the benefits and opportunities included:

    (a) using the technology behind cryptocurrencies for voting systems so they are fair, secure and convenient, and not able to be corrupted by rogue politicians;

    (b) money saved from using blockchain technology for things like voting being reinvested to build infrastructure;

---

[13] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2038/7d52ddafdcabc6947661de9fab1150cd48cb9276.

[14] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2074/4eac3c9cfdc0e1e7742cc2fead328a852b4ba4f6.

(c) identity management with control over data being with the individual rather than a central registry, thus increasing privacy; and

(d) using blockchain technology in education (for security of grades and monitoring school performance) and charities (providing a donation framework).

Tax issues

29. The Chartered Accountants Australia & New Zealand (**CAANZ**) in its an oral submission acknowledged the IRD had done a lot of work but expressed the need for IRD to do more. In particular CAANZ urged the IRD to publish a comprehensive framework similar to what the FMA did in respect of financial product categories in the digital asset context – i.e., looking to the characteristics of what has been offered and then allocating rules in respect of it.[15] In its written submission, CAANZ submitted that the best approach for tax purposes would be to treat:[16]

(a) cryptocurrencies with characteristics of equity, in the same manner as equities;

(b) cryptocurrencies with characteristics of debt, in the same manner as debt and debt instruments; and

(c) cryptocurrencies with characteristics of currencies, in the same manner as currency.

30. Some submitters asked for the IRD to provide simplified examples on the application of New Zealand's tax rules. We note that the IRD has since published guidance to this effect.[17]

31. Other points raised by submitters in relation to tax included (among other things):

(a) guidance on the tax implications on different digital assets;

(b) the possibility of minimum thresholds in relation to the taxing of digital assets;

(c) offering competitive tax rates to crypto mining businesses; and

(d) creating and making available a free crypto tax calculator tool for investors to use.[18]

Regulatory uncertainty

32. Many submissions addressed the theme of regulatory uncertainty, commenting on the suitability of existing regulations, specific applications in relation to Anti-Money Laundering/Countering Financing of Terrorism (**AML/CFT**), potential for new concepts, and principles for regulation of digital assets.

33. Key regulators, such as the FMA and RBNZ, submitted that they have been using or can use existing laws to regulate digital assets (including stablecoins) and related activity. We explore these in detail below in Part 2. Some submissions also note that existing laws have been working so far to regulate this space.

34. In its written submission, however, the RBNZ does consider that its (and other regulators') regulatory toolkits need expanding to manage the unique risks arising with digital assets and related services. However, other submissions argued that the impact of blockchain and digital assets on society will be as transformational as the internet. As such, regulators need to first understand the technology before considering new forms of regulation.

---

[15] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2548/8a7ba33a391afc52ff15149538acb2a0f8933159.

[16] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2003/7c1161fe671ab83697846a63032377b72f4fa49e at page 6.

[17] https://www.ird.govt.nz/cryptoassets

[18] At the time of writing this report some New Zealand tax crypto calculators were available including Taxoshi, Coinpanda, and Koinly. We cannot, however, comment on the calculators' compliance with New Zealand tax law.

35. The Ministry of Justice (**MoJ**) addressed the applicability of the Anti-Money Laundering and Countering Financing of Terrorism Act 2009 (**AML/CFT Act**) to digital assets and related service providers. (Organisations that facilitate the purchase of cryptocurrencies are called Virtual Asset Service Providers (**VASPs**)). The MoJ stated it is considering the following questions related to virtual assets and VASPs within the scope of its current review of the AML/CFT Act:[19]

    (a) whether existing obligations need to be specifically tailored for VASPs, since virtual assets and VASPs are currently covered generally under the AML/CFT Act;

    (b) whether specific thresholds for occasional transactions should exist for VASPs; and

    (c) whether virtual asset transfers should be considered cross-border wire transfers.

36. Various submissions suggested principles and approaches to consider in the development of regulation of digital assets, as follows:

    (a) review and keep rules consistent with international approaches;

    (b) do not to stifle innovation (e.g., overregulation and over taxing inhibits innovation);

    (c) preserve freedom of the people of New Zealand;

    (d) do not to classify terms too narrowly;

    (e) maintain flexibility for advances in technology;

    (f) consider enforcing carbon neutrality of technology.

    (g) implement safe harbours; and

    (h) determine risks of projects on a case-by-case basis.

37. One submitter, the Digital Asset Industry Response Group (**Group**) was set up by industry leaders Centrality, Easy Crypto and Techemy, with the support of BlockchainNZ, a member of the New Zealand Tech Alliance in order to respond to this Inquiry. The broader membership of the Group also included globally recognised pioneers, entrepreneurs, advisors and professional service providers across all facets of the cryptocurrency and blockchain industry. The Group notes:[20]

> *New Zealand's current regulatory framework largely reflects the current guidelines of the Financial Action Task Force (FATF), which sets international guidance and standards for regulation of Virtual Asset Service Providers (VASPs).*
>
> *The adaptive (rather than prescriptive) nature of New Zealand's current regulation has resulted in most cryptocurrency activities being captured under existing regulation.*

38. The Group recommends that policy makers:

> *… recognise and understand the work already undertaken by the Reserve Bank, FMA, DIA and IRD who already have policies in place to guide the industry, taking the lead of the FATF's guidance on cryptocurrencies and VASPs. That the best solution is for these agencies to continue to work with the industry to update and improve guidance as the industry evolves.*
>
> *… that the above Government agencies work together with the Ministry of Justice (MOJ) and industry experts to determine if the regulatory settings for cryptocurrencies and VASPs are appropriate to mitigate the financial, money laundering and terrorism financing risks*

---

[19] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2622/98384ff1174d11d04074c700530a17dd8d45cd40.

[20] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE1919/d49d96d1fa3d2301dc94157875c8603aee0d8354

associated with cryptocurrencies, while still meeting the purposes of the FMC Act (which includes promoting innovation and flexibility in the financial markets) and the purposes of the AML/CFT Act. The timing of the Committee's inquiry into cryptocurrencies and the MOJ's statutory review of the AML/CFT Act is fortunate.

39. The law firm Stace Hammond's submission cites the following as examples of how to address regulatory uncertainty:

(a) Apply Blockchain Australia's submissions to the Australian Senate Select Committee as they would apply to New Zealand:[21]

(i) New Zealand should implement a coordinated and graduated approach to the regulation of 'crypto-assets'. Focussed on providing greater certainty to consumers and businesses, while working to develop a fit-for-purpose framework. Facilitating an environment conducive to innovation and competition in 'crypto-assets'. This involves:

(A) implementing immediate safe harbour provisions;

(B) greater regulatory guidance and engagement in the short-term; and

(C) a long term, fit-for-purpose legislative framework;

(ii) regulators can provide greater guidance in areas such as custody, de-banking, taxation and AML/CFT. They will benefit both industry and enhance consumer protections by doing so; and

(iii) regulators should increase their resourcing and undertake greater engagement with the industry through the establishment of a regulator industry working group; and

(b) Implement the following recommendations from "Regulating Cryptocurrencies in New Zealand":[22]

(i) the Government should continue to allow crypto to be traded as well as used for the payment of goods and services within and outside New Zealand;

(ii) New Zealand-based crypto exchanges to be encouraged and clear guidance provided as to their AML/CFT obligations by both the Department of Internal Affairs (**DIA**) and FMA (i.e., follow Australia's example);

(iii) greater advice and therefore protection provided to consumers on crypto by the FMA, DIA and other organisations;

(iv) crypto exchanges and blockchain businesses that comply with AML/CFT and other requirements must have access to bank accounts with New Zealand banks;

(v) merchants must be able to accept crypto payments by people or organisations for under NZD 100 (in Stace Hammond's view NZD 1000 is more practical) or payments made through a New Zealand exchange (or an overseas exchange) that complies with AML/CFT requirements, without the merchants losing their bank accounts;

(vi) GST is removed from crypto that are used for the payment of goods and services;

(vii) IRD (further) clarifies other taxation rules around the use of crypto and accepts crypto for the payment of taxes; and

---

[21] https://blockchainaustralia.org/senate-select-committee-submission-on-australia-as-a-technology-and-financial-centre/.

[22] https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3340993 one of the authors of the "Regulating Cryptocurrencies in New Zealand" Report is a co-author of this Advisers' Report.

(viii) New Zealand should follow countries, such as the UK and Australia, and create a regulatory sandbox to ensure that the regulators work alongside fintech companies.

Need for collaboration in the development of regulation

40. Many submissions, mostly from those in the industry and supporters of the industry, emphasised the importance of collaboration between a range of entities and people. Those emphasising collaboration included regulators, industry (experts, creators of technology, businesses handling digital asset transactions), investors (users of the technology), and academics. These submitters indicated an interest in working with regulators and the Government to ensure regulation strikes a balance between innovation and protecting consumers.

41. While most of the regulators stated they were working with other New Zealand regulators or international regulators, the RBNZ in its oral submission called for cross agency involvement.[23] Some submissions by industry echoed the RBNZ's desire for a cross agency approach, although it was drafted in the context of the Committee working with necessary bodies to align findings from this report and the MoJ's report (completed in June 2022 and yet to be published) on the review of the AML/CFT Act, specifically in relation to VASPs.

Concern over consumer protection

42. Some submissions raised concerns over the protection of consumers when dealing with digital assets. For example:

(a) risks of stablecoins not honouring redemption promises or consumers not being aware of the risks to which they are exposed;

(b) hype being created in relation to certain digital assets that have no inherent value;

(c) risks of investors losing their private keys through self-custody; and

(d) other risks not related to the price of digital assets, such as fraud and cyber security breaches.

Concern over potential use in criminal activity

43. There were conflicting submissions in relation to whether the potential use of cryptocurrencies was inextricably linked to illicit activity.

44. Notably, the New Zealand Police expressed concerns over potential use of digital assets in criminal activity, citing the following examples:[24]

(a) **Terrorists, extremists and supporters:** Church Mosque Attack perpetrator using cryptocurrency payments to right wing organisations;

(b) **Organised criminals and money launderers:** Operating Brookings, which was a money laundering syndicate using Bitcoin, and Vinnik (a Russian National sentenced for money laundering) allegedly using a New Zealand company which provided multicurrency eWallet account software services to conceal proceeds of criminal offending; and

(c) **Cyber criminals, ransom attackers, fraudsters, and scammers:** the hacking of the Cryptopia cryptocurrency exchange, and the Waikato DHB attack where the attackers requested a cryptocurrency ransom for operational return of systems.

---

[23] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2548/8a7ba33a391afc52ff15149538acb2a0f8933159.

[24] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2637/3e8e557f6788f5e9331772b3920cf596ee18e09c.

Criminal activity

45. Generally, the submitters that were not overly concerned with the potential for the use of cryptocurrency in criminal activity observed that:

    (a) a lot of claims involving digital assets are conflated by the media;

    (b) while there may be outlier examples, it is dangerous to group the industry as a whole together because it may stifle innovation;

    (c) most cryptocurrency transactions are visible electronically, meaning that it can be difficult to hide criminal activity; and

    (d) the concerns expressed are not issues that are unique to digital assets and have always existed with other technologies.

46. One submission did recommend that the New Zealand government should join the global crypto security watchdogs.[25]

Environment impact of (some) cryptocurrencies

47. The environmental impact of cryptocurrencies was referenced in passing or only briefly discussed in most submissions. As with the potential use of cryptocurrencies in criminal activity, submissions were divided on the issue.

48. Some submissions argued that digital assets and blockchain had a negative impact on the environment because of the proof-of-work protocol.

49. In contrast, other submissions stated that concerns about environmental impact are no longer a major issue for blockchain and cryptocurrencies as a whole as the technological model has largely changed from proof-of-work (which uses considerable energy) to proof-of-stake or other less energy intensive consensus mechanisms. While Bitcoin uses proof-of-work, that was not true for the newer blockchains and Ethereum has recently moved to proof-of-stake. Some of these submissions observing that the current financial service industry uses more energy than does blockchain and cryptocurrencies. Other submissions observed that there was misinformation around energy consumption, and there were examples of Bitcoin mining producing net positive climate impact.

50. Some submitters also provided some initial solutions to address environmental concerns in relation to digital assets:

    (a) ban crypto mining in New Zealand;

    (b) only allow the use of renewable electricity to power crypto related activities;

    (c) link carbon footprint to digital assets that use a proof-of-work protocol;

    (d) tax mining activities directly for energy use and carbon emitted, but if outside New Zealand then tax at the interface; and

    (e) make it an offence to conduct activity in relation to digital assets that have a negative impact on the environment as it directly contradicts the Government's commitment to climate change.

[25] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE1925/bb4eae8892d456ff2160e0bad9ff516d425fce82.

Access to banking services

51. Some submitters expressed the concern that they and their businesses have had limited or no access to banking services with registered banks in New Zealand because they dealt with digital assets.

52. The RBNZ observed that digital assets can carry money laundering and terrorism of financing risks. Those risks include the ability of people and organisations to transact quickly globally and the potential for increased anonymity and reduced transparency. The RBNZ noted that its:

> *"… on-site inspections indicated that the banking industry in New Zealand appears to have no appetite to provide banking facilities to the crypto sector, among other things, due to AML/CFT compliance concerns"*

53. Other submissions also expressed interest in alternatives to banks such as decentralised finance (**DeFi**) platforms due to certain providers having low to no fees, versus borrowing from a major New Zealand registered bank with increased fees and conditions.

Need for education

54. Many submitters raised the need for education on multiple fronts – investors (particularly a typical retail client), Government and the Committee.

55. Other submissions also provided some ideas to promote education in this space, such as making digital assets and its related technology part of the NCEA curriculum. Those submitters were clear that education needs to start from ground up (including children), and include education around being safe with crypto.

Part Two: Overview of cryptocurrencies, digital assets, and blockchain

Definitional challenges

56. New technology often necessitates the creation and use of new terms. As the technology develops the terms change over time and there can sometimes be confusion as to their meaning. This part defines and explains the key terms used in this report.

Cryptocurrencies

57. The term "cryptocurrencies" is often used to refer to decentralised cryptocurrencies, such as bitcoin and ether. Cryptocurrencies use cryptography to ensure their security and use blockchain as the underlying technology (see below for an explanation about blockchain). A decentralised cryptocurrency is not issued or overseen by a central bank or central organisation, therefore it is different to, for example, the New Zealand dollar or the US dollar. Currencies, such as the New Zealand dollar, that are issued or overseen by a central bank are called "fiat currencies".

58. While bitcoin was the first cryptocurrency and was designed to be used as digital cash, ie to make payments, many of the other cryptocurrencies which have followed (there are thousands of cryptocurrencies),[26] are not designed to be digital cash. These other cryptocurrencies can be transferred between individuals and organisations, and some can be traded on cryptocurrency exchanges. Yet, it is difficult to use most of them for payments because organisations who do accept cryptocurrency payments will normally accept a handful of cryptocurrencies at the most.[27] However, the cryptocurrencies that are not designed as digital cash do have many uses which are looked at in this report. Cryptocurrencies also make up part of what are called "digital assets" below.

59. Even within the cryptocurrencies that are used as digital cash there can be significant differences:

(a) **Cryptocurrencies where the price is volatile**: Bitcoin, for example, is infamous for price volatility.

(b) **Stablecoins, which are cryptocurrencies designed to remain stable in price**. A stablecoin's price is normally pegged to another asset, such as the US dollar and often (but not always), backed by other assets. Those assets may be bank deposits, gold, other cryptoassets and so on.

Stablecoins are useful for many purposes, for example:

(i) Cross border payments;

(ii) Use in smart contracts (see "Smart Contracts" below);

(iii) Trading pairs, acting as a bridge between fiat currencies and cryptocurrency, especially useful for those wanting to sell a cryptocurrency without leaving the blockchain eco-system; and

(iv) Institutional and reserve banking.

The market share and importance of stablecoins is growing. In May 2022 it was estimated that stablecoins represented 10% of the cryptocurrency market.[28] In October 2022, three of the seven largest cryptocurrencies in terms of market cap were stable coins.[29] Most

---

[26] In March 2022 it was estimated that there were over 10,000 different types of cryptocurrencies, see https://explodingtopics.com/blog/number-of-cryptocurrencies.

[27] This is similar to fiat currencies. For example, a New Zealand business will accept New Zealand dollars and might accept payments in certain other countries, but would not accept payment of any fiat currency.

[28] https://www.cornwalls.com.au/on-the-rise-and-rise-of-stablecoins/.

[29] Those stable coins were USDT (Tether) at no. 3, USDC (USD Coin) at no. 5, BUSD (Binance USD) at no. 7. Information taken from https://coinmarketcap.com/.

stablecoins are not currently regulated. It is important to note that there are significant differences between stablecoins.

Stablecoins can be divided into four types:[30]

(v) **Backed by fiat currency (fiat-collaterised)** – where the stablecoin's operators hold one US dollar, Euro, other currency, or mix of currencies, for each stablecoin minted. The fiat currency is held in a bank account or several bank accounts as reserves, giving them an appearance of safety. But questions remain about the correct representation of such bank deposits/reserves;

(vi) **Backed by commodities (commodity-collateralised)** – backed by physical assets such as gold or even real estate. Commodity prices, however, can fall and again the operators must be trusted to hold enough commodities as reserves;

(vii) **Backed by cryptocurrency (crypto-collaterised)** – DAI (issued by MakerDAO) is the most prominent example. An advantage of such stablecoins is that, unlike fiat-collaterised or commodity collateralised stablecoins, the crypto-collateral can be seen by all, increasing transparency and trust; and

(viii) **Algorithmic (not backed by anything)** – where the price is designed to remain stable through the use of economic incentives. Due to their lack of backing, these stablecoins "*are fundamentally different than other stablecoins*".[31] While those incentives may be ingenious, as the collapse of the stablecoin TerraUSD in May 2022 showed, they are problematic. It was not a surprise to many that TerraUSD failed as there were many concerns about whether algorithmic stablecoins and TerraUSD in particular could work. However, the demise of TerraUSD does not mean that an algorithmic stablecoin could not work. A large reason for TerraUSD's failure was that people were incentivised to obtain TerraUSD because they were able to gain nearly a 20% return on their holdings of TerraUSD.[32]

(c) **Private global stablecoin** - the stablecoins described above are decentralised stablecoins. It is possible for one entity or a group of entities to create a centralised stablecoin that could be used throughout the world. Facebook (now Meta), attempted to do this with Libra, which became Diem. Due to various factors, including opposition from regulators, Meta has withdrawn from the project.[33]

(d) **Crypto assets / Digital assets** - these terms are often used interchangeably. While, some definitions of digital assets do not require that a digital asset has to be secured and supported by a blockchain: "*[a] digital asset is anything that is stored digitally and is uniquely identifiable that organizations can use to realize value. Examples of digital assets include documents, audio, videos, logos, slide presentations, spreadsheets and websites.*"[34] In addition, the UK and Wales Law Society's "Blockchain: Legal & Regulatory Guidance" (2nd ed) uses "crypto assets" for more than simply cryptocurrencies.[35] In contrast, other organisations use the term digital asset to refer to cryptocurrencies and related tokens.[36] As noted above, this report uses the term crypto asset for cryptocurrencies and digital assets for both cryptocurrencies and other assets secured and supported by blockchain technology, such as NFTs. Thus cryptocurrencies are a subset of digital assets.

---

[30] https://www.stuff.co.nz/business/opinion-analysis/300601064/crypto-crush-why-were-not-giving-up-on-stablecoins.

[31] https://rollcall.com/2022/05/03/critics-see-risk-in-algorithmic-stablecoins/.

[32] https://www.theverge.com/2022/5/20/23131647/terra-luna-do-kwon-stablecoin-anchor.

[33] https://www.bbc.com/news/technology-60156682.

[34] https://www.gartner.com/en/finance/glossary/digital-assets.

[35] https://www.lawsociety.org.uk/topics/research/blockchain-legal-and-regulatory-guidance-second-edition.

[36] https://www2.deloitte.com/xe/en/pages/finance/solutions/custody-digital-assets.html.

Blockchain

60. Blockchain is a technology used to create digital ledgers that are distributed and decentralised. The first blockchain was the Bitcoin blockchain. While currently the main use of blockchain technology is to create cryptocurrencies, blockchain is a general-purpose technology that can and is being used for many different purposes.

61. Because the term "blockchain" is used in a variety of ways, its meaning will depend upon the context. The term blockchain can be used to describe:

    (a) **Blockchain technology generally.** For example, blockchain technology is used by cryptocurrencies and NFTs (see below) and blockchain can be used for a wide array of different things including digital identity;

    (b) **A particular blockchain**. For example, many NFTs are being minted (created) on the Ethereum blockchain. Or Bitcoin's blockchain is so large that it takes many days to download;

    (c) **A specific type of blockchain**, i.e. a blockchain that uses a series of blocks that are linked to each other cryptographically in a sequential way, for example, Bitcoin's blockchain and Ethereum's blockchain. Not all blockchains use blocks of data sequentially linked;[37]

    (d) **All public/permissionless blockchains**. The most well-known are Bitcoin and Ethereum. With a public/permissioned blockchain anyone can use it (in contrast, with permissioned blockchains, permission must be granted before a person can use it); and

    (e) Used as a generic term to describe **distributed ledger technology (DLT)**. DLT covers many different types of data structures and also includes both public blockchains (such as Bitcoin and Ethereum) and permissioned blockchains. With a permissioned blockchain permission must be granted to use it.

Smart contracts

62. Smart contracts, which run on a blockchain, can be thought of as storing and executing business rules or logic. In addition, and a large part of the usefulness of smart contracts, is that they can be used to hold cryptoassets and pay them out when specified conditions have been met. For example, instead of a third party acting as an escrow and holding funds for the seller and purchaser of goods, the smart contract holds the funds. Once the purchaser confirms the goods have been received to their satisfaction, the smart contract releases the funds to the seller. The use of a smart contract avoids the risk of a traditional escrow absconding with the funds. (If a traditional escrow is used and they abscond with the funds, they will have broken the law. While the seller and purchaser can sue the escrow, this is a time consuming and expensive process and rarely will the innocent parties be paid back in full.)

63. While many smart contracts will involve the transfer of cryptoassets and digital assets more generally, not all will. For example, if blockchain is used in a supply chain, most of the uses of smart contracts will be by parties in the supply chain to record information similar to what they currently do in their separate Enterprise Resource Planning (ERP) systems. However, the use of smart contracts means that the information cannot be tampered with once recorded and it can be made visible to other participants in that supply chain.

64. There are caveats with smart contracts:

    (a) The term "smart contract" is misleading because smart contracts are not smart, and they are often not legal contracts;

[37] https://101blockchains.com/blockchain-vs-hashgraph-vs-dag-vs-holochain/.

(b) Smart contracts are not smart because they are coded/programmed to perform in a certain way. If there is an error in the code or unforeseen circumstances arise, the smart contract will not operate and in some situations, funds may be trapped in the smart contract and are lost;

(c) While some smart contracts can be legal contracts, often they are not. For example, blockchain voting systems, for local and other elections, use smart contracts to record votes. For those smart contracts where the intention is to form a legal contract, such contracts are likely to be simple ones; and

(d) There have been many overblown claims about what smart contracts can do. They are not a panacea, and their use is currently limited.[38]

Origins and overview of the global industry

65. The cryptocurrency and blockchain industry began with the release of the Bitcoin whitepaper[39] in 2008 and then the release of Bitcoin's blockchain in early 2009, thus it is a young industry.[40] Since 2009 the industry and the technology has grown and developed at an exponential pace. This part briefly outlines the development of cryptocurrencies, digital assets and blockchain, and explains many of the core uses of cryptocurrency and blockchain.

66. As this part demonstrates, the use of blockchain and cryptocurrency is not a niche self-contained industry, many established organisations and industries are using or trialling blockchain and/or cryptocurrencies within their businesses. Organisations using blockchain as a critical part of their business include Walmart,[41] and Maersk.[42] to facilitate their operations. The ASX (Australian Stock Exchange) is building its new clearing system as a blockchain system.[43] Large and established financial institutions are active in the crypto space, they include Goldman Sachs, Morgan Stanley, JPMorgan Chase, Deutsche Bank, Bank of America, Wells Fargo, Citigroup and Barclays.[44] Indeed, the perceived benefits of cryptocurrencies have lead most central banks around the world to develop, or work towards developing, their own versions of stablecoins: central bank digital currencies (CBDCs). The RBNZ is currently exploring whether to issue a New Zealand CBDC.

Bitcoin origins

67. Bitcoin was the first decentralised cryptocurrency. Bitcoin's blockchain was also the first example of what is called a blockchain. Bitcoin enabled the creation of peer-to-peer payment system operating outside of the traditional banking industry, that was not controlled by any one person or organisation or a small group of people or organisations. For many years prior to Bitcoin, cryptographers had attempted to create a system that allowed the creation and transmission of digital cash and solve the "double spend" problem. Take the owner of a digital file, which represented a dollar, who wants to use it to pay for goods online. Simply sending the file is not sufficient to satisfy the recipient that the payment has been made as the sender could have made multiple copies of the digital file (as the files would look identical). While it was possible to solve the double spend problem it would require centralised financial institutions, which used secure central ledgers to record who owned what. Bitcoin's breakthrough was to solve the double spend problem and creating digital cash without using central institutions.

---

[38] https://www.coindesk.com/markets/2016/04/17/why-many-smart-contract-use-cases-are-simply-impossible/.

[39] https://bitcoin.org/bitcoin.pdf.

[40] It is sometimes said that blockchains origins are much older Bitcoin. It is true that many people were working on different aspects of what became blockchain, but prior to blockchain there was no way of sending digital cash without a central institution monitoring the transactions.

[41] https://www.paymentsjournal.com/walmart-canada-is-using-blockchain-to-ease-supply-chain-burdens/.

[42] https://piernext.portdebarcelona.cat/en/technology/tradelens-the-blockchain-platform-for-maritime-logistics/.

[43] https://www.afr.com/chanticleer/turning-point-for-asx-s-250m-blockchain-project-20211130-p59dcm.

[44] https://www.cnbc.com/2022/04/01/as-wall-street-banks-embrace-crypto-start-ups-look-to-lure-top-finance-talent-.html#:~:text=JPMorgan%20Chase%2C%20Morgan%20Stanley%20and,working%20in%20its%20Onyx%20division.

68. The first explanation of Bitcoin was through the publication in 2008 of *Bitcoin: A Peer-to-Peer Electronic Cash System* (Bitcoin's white paper), written by the pseudonymous Satoshi Nakamoto.[45] Bitcoin was launched in January 2009 when people were able to see Bitcoin's code, mine its blocks and transfer bitcoin. In the early stages, Bitcoin was not widely known or used. In fact, the first recorded case of the use of bitcoin to purchase goods or services occurred in May 2010 when a person paid 10,000 bitcoin for two pizzas from Papa John's.[46] However, even then the payment was not made directly to Papa John's. Instead, the purchaser offered to send someone 10,000 bitcoin if they ordered and paid (using a credit card) for the pizza delivery. Gradually bitcoin began to be seen as more than a novelty. In June 2011 one bitcoin was valued at $1 USD and some organisations began to accept it as payment. The uptake of organisations accepting bitcoin as payment was assisted in 2015 by Stripe when it began to process bitcoin transactions.[47]

69. In addition to bitcoin as a cryptocurrency, others realised early the potential of Bitcoin's blockchain beyond payments. For example, instead of bitcoin, which was fungible, as each bitcoin was the same as another,[48] "coloured coins", which represented the ownership of physical assets ("smart property"), could be used.[49] These additional uses of Bitcoin's blockchain interested many people, with some working on Bitcoin and Bitcoin clones. However, extending Bitcoin's use to coloured coins and other **layer two applications**, such as smart contracts, proved difficult. Others thought they could design alternative and more sophisticated blockchains, such as Ethereum.

Ethereum

70. Ethereum's white paper[50] was released in 2014, with Ethereum's blockchain launched in 2015. Ethereum was designed to overcome many of the perceived limitations of Bitcoin and create:[51]

> *"a blockchain with a built-in fully fledged Turing-complete programming language that can be used to create 'contracts' that can be used to encode arbitrary state transition functions, allowing users to [create advanced applications such as decentralized exchange, financial derivatives, peer-to-peer gambling and on-blockchain identity and reputations system], as well as many others that we have not yet imagined, simply by writing up the logic in a few lines of code:"*

71. The intent of Ethereum to create a blockchain capable of creating smart contracts has been successful. Ethereum is used by many other applications, including cryptocurrencies that are built upon it, using the ERC-20 standard.[52] Many cryptocurrencies and other tokens use Ethereum, such as DAI, one of the largest stablecoins, and the majority of NFTs use Ethereum.[53] And, at the time of writing its cryptocurrency, ether, had the second largest market cap after bitcoin.

Initial coin offers and related forms of fund raising

72. The term "initial coin offer" (ICO) is a play on "initial public offer" (IPO). ICOs can also be called token generating events (TGEs). Beginning in July 2013 with Mastercoin and continued in 2014 by Ethereum, organisations wanting to create new blockchains, cryptocurrencies and other projects engaged in capital raising through crowdfunding. "Investors" would send bitcoin in return for tokens

---

[45] https://bitcoin.org/bitcoin.pdf.

[46] https://www.forbes.com/sites/rufaskamau/2022/05/09/what-is-bitcoin-pizza-day-and-why-does-the-community-celebrate-on-may-22/?sh=1162b97cfd68.

[47] While Stripe is not as well-known to the general public as PayPal, it is one of the biggest payments processor in the world and is used by many organisations in New Zealand for online payments. For a history of Stripe and its use see https://www.wired.co.uk/article/stripe-payments-apple-amazon-facebook.

[48] Technically unlike cash transactions because bitcoin transactions can be traced it is possible to have "dirty" or "tainted" bitcoin that is not worth as much as "clean" or "virgin" bitcoin.

[49] https://www.coindesk.com/markets/2013/06/14/colored-coins-paint-sophisticated-future-for-bitcoin/.

[50] https://ethereum.org/669c9e2e2027310b6b3cdce6e1c52962/Ethereum_Whitepaper_-_Buterin_2014.pdf.

[51] https://ethereum.org/669c9e2e2027310b6b3cdce6e1c52962/Ethereum_Whitepaper_-_Buterin_2014.pdf.

[52] ERC-20.

[53] The majority of NFTs using Ethereum use the ERC-721 standard and see https://decrypt.co/resources/erc-721-ethereum-nft-token-standard.

in the new project. Payment slowly changed to being predominately ether (the cryptocurrency of the Ethereum blockchain), fuelled by the fact that many of the projects used the ERC-20 token standard.

73. In the early days, ICOs were the wild west of fundraising.[54] However, over time, regulators in many jurisdictions have begun to assert that existing securities law requirements may apply to such offers.[55] In New Zealand, the FMA has published guidance on its website encouraging potential issuers to consider whether digital assets offered under an ICO are regulated financial products.[56]

Tokenomics – use of coins and tokens within digital ecosystems

74. "Tokenomics" is a portmanteau of "token" and "economics". Tokenomics means the use of economic incentive models, including token distributions, in a particular blockchain or blockchain application. That is, how can a blockchain's incentives be designed to produce desirable outcomes for its network stakeholders? Importantly not all incentives are financial. For example, some computers, full nodes, perform a valuable role in the network, but are not paid to do so. The full nodes store their own copy of the Bitcoin blockchain and validate transactions and blocks. Many of the people operating full nodes, however, will be holders of bitcoin and running a full node helps to ensure the stability and security of the Bitcoin blockchain. Similarly the blockchain developers who work on Bitcoin are not paid directly for their services. In contrast, Bitcoin financially incentivises others to provide computing resources to secure Bitcoin's ledger, ie through "mining", by providing the successful miner with tokens (the block reward[57]) and transactions fees.

75. The Tokenomics vary between blockchains and blockchain projects. Later blockchains and applications have learnt lessons from earlier ones. Dash, for example, pays miners only 40% of the block reward and transaction fees. The remaining 60% is split between the Masternodes, people that provide computing resources and vote on proposals, (40%) and the treasury (20%). The treasury is used to pay for development and other work on Dash. Moreover Dash's treasury is not a traditional treasury that hoards resources. Instead, the treasury's funds are distributed to the people and organisations who have been successful in proposing work for Dash. The decision not to accumulate resources in Dash's treasury is an elegant example of tokenomics: there is no large pot of resources for someone to attack and computing resources are better used to work with the system as a miner and/or a Masternode, rather than attempt to hack it.

Decentralised financial services (DeFi)

76. DeFi is short for Decentralised Finance. The following is a good summary:[58]

> *"Decentralized finance, also known as DeFi, uses cryptocurrency and blockchain technology to manage financial transactions. DeFi aims to democratize finance by replacing legacy, centralized institutions with peer-to-peer relationships that can provide a full spectrum of financial services, from everyday banking, loans and mortgages, to complicated contractual relationships and asset trading."*

77. Notwithstanding that much of the talk about blockchain and cryptocurrencies is that they cut out middlemen and intermediaries, often the peer-to-peer relationships are facilitated by intermediaries as the peers are using a platform created by an intermediary. While on its face this appears to be similar to other peer-to-peer industries, for example, most peer-to-peer short term rentals are facilitated by platforms such as AirBnB, there is a significant difference. Most DeFi platforms are permissionless and can be used by anyone. In contrast, with AirBnB, the accommodation providers

---

[54] https://www.fxempire.com/education/article/initial-coin-offering-ico-the-wild-west-of-fundraising-452592 and https://fortune.com/2018/09/19/bitcoin-uk-treasury-committee-regulation/.

[55] Beginning most notably with the report of the Securities and Exchange Commission in the United States on The DAO: https://www.sec.gov/litigation/investreport/34-81207.pdf.

[56] https://www.fma.govt.nz/news-and-resources/media-releases/fma-commentary-on-icos-and-cryptocurrencies/.

[57] The block reward in Bitcoin is currently 6.25 BTC (bitcoin) per block. A new block in Bitcoin is created approximately every 10 minutes. At the time of writing on 30 July 2022, 6.25 BTC are worth $240,350 NZD. and see https://www.coindesk.com/learn/what-is-a-block-reward/.

[58] https://www.forbes.com/advisor/investing/cryptocurrency/defi-decentralized-finance/.

and those seeking to book accommodation are registered with AirBnB and thus their identities are known.

78. Examples of DeFi include:

(a) Interest Rate Swap Markets;[59]

(b) Decentralised cryptocurrency exchanges (DEXs); and

(c) Yield farming[60] – where people lend cryptocurrency and are paid interest.

Non-fungible tokens (NFTs)

79. Non-fungible means that something is not interchangeable or replaceable with something else. Money or cash is an example of something that is fungible. If B lends C $100 in bank notes, B does not expect to be repaid the exact same bank notes. Similarly one bitcoin is interchangeable with another bitcoin. In contrast, if B lent a museum a painting for an exhibition, B would expect to get that painting back, not another one. A painting is non-fungible. An NFT is a token that uses blockchain and many NFTs operate on blockchains that also support cryptocurrencies. For example, the Ethereum blockchain supports the cryptocurrency ether, many NFTs, and a large number of other cryptocurrencies, for example, the DAI stablecoin.[61]

80. Most of the discussion and hype around NFTs has been in relation to NFT digital artworks.[62] However, NFT digital artworks, are only one small example of how NFTs are and can be used. NFTs can be used in a near infinite number of ways. Some of the uses include:

(a) concert[63] and other tickets including plane tickets;[64]

(b) bills of lading;[65]

(c) digital identity[66] and specific forms of identity such as passports;[67]

(d) educational qualifications,[68]

(e) medical data,[69]

(f) real estate (both in the real world and in the metaverse); and[70]

---

[59] https://www.voltz.xyz/.

[60] https://blockworks.co/what-is-yield-farming-what-you-need-to-know/#:~:text=Yield%20farming%20is%20the%20process,can%20employ%20more%20complex%20tactics.

[61] https://cryptonews.com/coins/dai/.

[62] https://www.afr.com/technology/hot-market-for-nfts-cools-as-digital-art-boom-fades-20220506-p5aj67.

[63] https://hypebeast.com/2022/3/lupe-fiasco-gucci-mane-defy-tickets-nft-platform and https://cointelegraph.com/news/showtime-nft-tickets-take-the-stage-in-2022-connecting-artists-and-fans.

[64] https://simpleflying.com/nft-future-airline-tickets/.

[65] https://www.ojs.unito.it/index.php/JLMI/article/view/6673

[66] https://www.privacyaffairs.com/nft-identity-verification/.

[67] https://www.businessinsider.com/how-to-use-nfts-real-world-passport-concert-tickets-2022-3.

[68] https://observatory.tec.mx/edu-news/how-do-nfts-support-education#:~:text=NFTs%20can%20substitute%20for%20diplomas,progress%2C%20and%20preserving%20educational%20data.

[69] https://www.scientificamerican.com/article/some-medical-ethicists-endorse-nfts-heres-why/.

[70] https://propy.com/browse/propy-nft/.

(g) serving of legal documents on anonymous defendants.[71]

81. In addition to broad range of uses of NFTs beyond digital art, there are also many other misunderstandings about NFTs. This part addresses the most common misunderstandings:

(a) **All NFTs are minted created on Ethereum** – while many NFTs are minted on Ethereum, some are not. For example:

(i) CENNZnet (used in New Zealand by Glorious Digital[72] and Fluf World[73]);

(ii) Flow (the NBA's Top Shot NFTs uses this blockchain);[74]

(iii) Solana;[75]

(iv) Polygon;[76] and

(v) Tezos.[77]

(b) **An NFT is unique and there can never be another one**:

(i) Whether an NFT is unique depends on the type of NFT. It is possible to have a limited edition of an NFT. Therefore, it is similar to how there can be 100 prints of a painting. Thus one person can own 1/100, another 2/100 and so on. For example, NBA Top Shot NFTs are normally sold in limited editions which vary depending on the series. The NBAs has multiple tiers of rarity, which include, 99 for Legendary, 749 for Rare, and from 4,000 to over 60,000+ for Common. Nike, for example, has released NFTs for digital shoes and some pairs have re-sold for over $100,000 USD.[78]

(ii) Normally non-fungibility means that the NFT is owned by one person and is not divisible, in contrast, bitcoin can be divided into 100 million satoshis. However, some NFTs are divisible, so more than one person can own part of the same NFT. Such NFTs are called F-NFTs (Fractionalised NFTs) and will be useful for some situations, for example, multiple owners of an expensive artwork or for real estate.

(iii) A person creating an NFT may make another or multiple copies of the same artwork (with or without slight differences) and sell each NFT as a one-off original. This, however, is no different to the current situation of an artist painting multiple copies of the same painting and in New Zealand will breach the Fair Trading Act 1986. Thus purchasers of digital art NFTs must trust the honesty of the NFT creator, just as they must trust the honesty of artists in more traditional art forms.

(c) **NFTs are being used to launder money[79]** - digital art NFTs may be used by some to launder money. However, the traditional art market is rife with money laundering as the

---

[71] https://www.law.com/dailybusinessreview/2022/06/09/in-new-approach-big-law-firm-uses-nft-to-serve-court-papers-on-anonymous-defendants/?cmp_share and https://www.coindesk.com/policy/2022/07/13/uk-court-allows-serving-of-suits-via-nfts/.

[72] https://www.glorious.digital/.

[73] https://medium.com/centrality/cennznet-at-sxsw-tech-festival-9300f5735998.

[74] https://support.nbatopshot.com/hc/en-us/articles/1500002632021-The-Flow-Blockchain.

[75] https://nftnow.com/guides/everything-you-need-to-know-about-the-solana-blockchain-and-nfts/.

[76] https://polygon.technology/ and see https://cryptoslate.com/heres-why-opensea-users-are-buying-more-nfts-on-polygon.

[77] https://tezos.com/non-fungible-token/.

[78] https://www.cbsnews.com/news/nike-cryptokicks-nft-blockchain-metaverse-rtfkt/.

[79] https://www.idnow.io/blog/nft-non-fungible-tokens-new-art-money-laundering/#:~:text=In%20sum%2C%20unfortunately%2C%20NFTs%20can,launder%20money%20without%20being%20detected.

United States' Department of Treasury makes clear in its "Study on the Facilitation of Money Laundering and Terror Financing through the Trade of Works of Art".[80]

Central bank digital currencies (CBDCs) – opportunities and risks

82. CBDCs are a "*digital form of fiat money issued by a central bank*".[81] A CBDC serves as legal tender,[82] in contrast to the current electronic money in retail bank accounts that is created by retail banks and is not legal tender.[83] Ninety percent of central banks around the world are actively exploring releasing CBDCs.[84] The RBNZ is one such bank. The RBNZ, following consultation around its Central Bank Digital Currency issues paper,[85] announced in February 2022 that it was starting proof-of-concept design work on a CBDC for New Zealand.[86]

83. The work on CBDCs is due to both the opportunities they offer as well as the risks if governments do not create CBDCs. As with anything, there are risks in the creation of CBDCs, but these are perceived to be outweighed by the benefits.

84. The opportunities for CBDCs are that unlike our current electronic money issued by retail banks, and fiat currency created by the RBNZ (bank notes and coins), a CBDC could be used in smart contracts. This will facilitate the more rapid use of smart contracts and their benefits in New Zealand. To be sure, as the RBNZ has identified, when creating a CBDC it needs to be mindful of not destabilising New Zealand's banking system. This may occur if the CBDC competes with deposits at both the household and wholesale level or there are runs on banks to the safer CBDC in times of financial uncertainty.[87] On the other hand, not creating a New Zealand CBDC carries risks. Businesses and others will continue to use and increase their use of stablecoins in the absence of CBDCs because of the utility of stablecoins in smart contracts and other financial transactions.

Decentralised autonomous organisations (DAOs)

85. DAOs are a new form of organisation run on blockchain. DAOs can be used for a range of organisations, from not-for-profit organisations, through to for profit ventures.[88]

86. The use of "autonomous" is misleading as DAOs are not autonomous, instead they require people to set the rules of the DAO as well as to make changes to those rules. Changes in rules are necessary because it is impossible to foresee the future and, as often occurs, if a mistake is found, the rules will require changing. If the rules cannot be changed it is likely that the DAO will become unworkable and/or cease to exist. Indeed, the first high profile DAO, the poorly named "The DAO", was wound up because its rules could not be amended following a hack.

87. The usefulness and increasing popularity of DAOs has been recognised, as have the limitations of existing legal structures to accommodate them. US states including Wyoming[89] and Vermont[90] have passed laws facilitating the legal recognition of some DAOs. DAOs can be registered as legal entities in the Marshall Islands.[91] The Australian Senate in its Report, recommended that Australian corporations law (the equivalent of New Zealand's company law), be amended to accommodate

---

[80] https://home.treasury.gov/system/files/136/Treasury_Study_WoA.pdf.

[81] https://www.imf.org/en/News/Articles/2020/10/30/sp103020-new-forms-of-digital-money.

[82] https://www.grantthornton.co.nz/insights/are-cryptocurrencies-cbdc-and-stablecoins-the-future-of-new-zealands-financial-sector/.

[83] https://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Bulletins/2007/2007sep70-3mcbride.pdf.

[84] https://www.bis.org/publ/bppdf/bispap125.pdf. For an up-to-date resource on the development of CBDCs by country, see https://cbdctracker.org/.

[85] https://www.rbnz.govt.nz/have-your-say/closed-consultations/future-of-money---central-bank-digital-currency.

[86] https://www.rbnz.govt.nz/hub/news/2022/02/innovation-key-to-the-future-of-money-and-cash.

[87] https://www.rbnz.govt.nz/have-your-say/closed-consultations/future-of-money---central-bank-digital-currency.

[88] https://blockchain.org.nz/2022/05/11/what-are-daos/. For an in-depth analysis of DAOs see https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3971228.

[89] https://www.wyoleg.gov/Legislation/2021/SF0038.

[90] https://legislature.vermont.gov/statutes/section/11/025/04173.

[91] https://www.winston.com/en/the-playbook/a-new-frontier-for-daos-legal-recognition-the-marshall-islands.html.

DAOs.[92] The Australian Government has accepted this recommendation and is working at pace on DAOs. As Senator Andrew Bragg noted recently: "*Decentralised Autonomous Organisations can replace Companies. It might be the most significant development since the first joint stock companies were floated on the Amsterdam Stock Exchange in 1602.*"[93] In New Zealand, the Ministry of Business, Innovation and Employment (**MBIE**) in its draft "Long-term Insights Briefing on the Future of Business in Aotearoa New Zealand" has recognised the potential that DAOs have for the future of Aotearoa New Zealand.[94]

Web3 and metaverse

88. Web 3 and the metaverse are often used interchangeably, and although they are connected there are differences between the two.[95] Blockchain and cryptocurrencies are widely (although not universally) considered to be fundamental technologies to the operation of both.

89. Web 3 is a continuation and evolution of the internet. The internet's first iteration is sometimes called Web 1 and was "read only". Organisations and others put information on the internet which others passively consumed. Web 2, which currently dominates, is "read-write". Personal blogs and podcasts are just two examples of Web 2, with social media being the height of this paradigm. Web 3 is "read, write and own". Instead of large centralised eco-systems and organisations, such as Facebook and Youtube, which gather and harvest information, especially personal data, people will have more control as well as ownership of their data. Blockchain is the technology that will be used in the foreseeable future to enable people and to own assets and control their personal data.

90. The metaverse is a collection of online worlds. Some readers will have already experienced proto versions of metaverses, which include Second Life,[96] Fortnite and World of Warcraft.[97] The term "metaverse" is therefore slightly confusing as there will not be one metaverse, rather there will be a series of different metaverses. The difference between on the one hand, the proto versions of metaverses and on the other hand, the more modern metaverses and ones yet to be created, is the ability in the latter of participants moving easily between the different worlds and more importantly move their digital assets including money between them. This is also where Web 3 intersects with the metaverse. If a person owns, for example, a pair of Nike sneaker NFTs, their avatar can wear those sneakers as they travel through different metaverses. Payments for services and goods within metaverses are likely to be done mainly through cryptocurrencies and possibly CBDCs.

91. Metaverses will be owned and governed in one of two main ways.[98] The first is through a traditional centralised structure. A centralised structure is what Meta (formerly Facebook) is currently building.[99] The alternative are metaverses which are decentralised and governed by DAOs.[100]

92. Just as governments have a presence in Web 2, for example, through comprehensive information delivered on government department websites and substantial advertising on social media platforms,[101] governments will have a presence in the metaverse, for example, online embassies.[102]

---

[92] https://parlinfo.aph.gov.au/parlInfo/download/committees/reportsen/024747/toc_pdf/Finalreport.pdf;fileType=application%2Fpdf.

[93] https://www.startupdaily.net/topic/cryptocurrency/senator-andrew-bragg-calls-for-a-single-act-for-the-australian-government-to-regulate-crypto-and-blockchain/. For a discussion on how DAOs can be seen as an evolution of companies, see https://papers.ssrn.com/sol3/papers.cfm?abstract_id=352467.

[94] https://www.mbie.govt.nz/have-your-say/draft-long-term-insights-briefing-on-the-future-of-business-for-aotearoa-new-zealand/.

[95] https://www.coindesk.com/layer2/2021/12/21/web-3-and-the-metaverse-are-not-the-same/.

[96] https://gamerant.com/second-life-sansar-metaverse-design-philosophy-history/.

[97] https://www.informationweek.com/software/what-fortnite-and-world-of-warcraft-can-teach-us-about-the-metaverse.

[98] https://player.fm/series/welcome-to-the-metaverse/what-are-the-major-virtual-worlds-currently-up-to-and-what-metaverse-experiences-will-win.

[99] https://www.vox.com/recode/22799665/facebook-metaverse-meta-zuckerberg-oculus-vr-ar.

[100] https://accelerationeconomy.com/metaverse/how-daos-impact-the-metaverse/.

[101] https://www.newshub.co.nz/home/politics/2020/04/government-won-t-stop-spending-millions-on-google-and-facebook-ads-kris-faafoi.html.

[102] https://www.bloomberg.com/news/articles/2021-12-14/barbados-tries-digital-diplomacy-with-planned-metaverse-embassy.

Cities too are embracing the metaverse. Seoul and Dubai are planning to allow their residents and others to access services in the metaverse.[103]

Blockchain in established industries

93. While blockchain's early uses were largely by enthusiasts and startups, existing organisations have trialled and many are using blockchain. Those uses can either be in established organisations, such as Walmart,[104] Maersk[105] or they can be used by new organisations to disrupt that industry, for example Trade Window.[106]

94. Already large organisations are offering services to those wishing to use blockchain in their businesses. IBM and Amazon (AWS) both provide blockchain services, including running blockchains. Professions, including accountants, are also active in providing services for clients that are using blockchain and cryptocurrencies in their operations. All the large accounting consulting firms have divisions dedicated to blockchain and cryptocurrencies. In addition, some are going further with, for example, PwC[107] and Deloitte[108] purchasing land in the metaverse to engage with their clients.[109]

95. The traditional finance industry, including retail banks, are also using blockchain in numerous ways. Just a few of those ways are:

(a) Digital guarantees by a consortium of Australian banks and other organisations including IBM;[110]

(b) The BBVA, Mitsubishi UFJ, and BNP Paribas banks for syndicated loan to improve efficiency and cutting the loan process from about two weeks to two days, "*[e]ach step of the loan process, from credit underwriting to credit administration, is documented in the distributed ledger, thereby eliminating the need for duplicative back office processing*".[111] Each record has a user code and time stamp, creating an audit trail, leading to higher level of trust among the participants;[112] and

(c) JP Morgan, DBS and JP Morgan have established Partior, the Singapore real-time clearing and settlement network.[113]

New Zealand industry

Blockchain NZ

96. There is an active New Zealand blockchain industry. BlockchainNZ, the primary industry body for blockchain in New Zealand, and a part of the NZ Tech Alliance, has over 70 members.[114]

---

[103] https://venturebeat.com/2022/05/05/how-seoul-is-creating-a-metaverse-for-a-smarter-city/ and https://www.beyondgames.biz/22687/dubai-doubles-down-on-metaverse-development/.

[104] https://www.paymentsjournal.com/walmart-canada-is-using-blockchain-to-ease-supply-chain-burdens/.

[105] https://piernext.portdebarcelona.cat/en/technology/tradelens-the-blockchain-platform-for-maritime-logistics/.

[106] https://tradewindow.io/.

[107] https://businesschief.asia/technology/why-firms-are-buying-virtual-real-estate-pwc-to-samsung.

[108] https://www.niftyhype.com/article/deloittes-retail-metaverse-store-of-the-future-is-now-live.

[109] See also See also Prager Metis International LLC, an accounting and advisory firm, which purchased a three storey property on Decentraland in December 2021https://www.wsj.com/articles/accounting-firms-scoop-up-virtual-land-in-the-metaverse-11641599590.

[110] https://www.westpac.com.au/news/making-news/2020/09/blockchain-breakthrough-bank-guarantees-digitised/.

[111] https://www.mas.gov.sg/news/speeches/2019/can-the-three-musketeers-click.

[112] https://www.mas.gov.sg/news/speeches/2019/can-the-three-musketeers-click.

[113] https://www.mas.gov.sg/news/speeches/2022/speech-by-mr-heng-swee-keat-deputy-prime-minister-and-coordinating-minister-for-economic-policies-at-the-asia-tech-x-singapore-summit-on-31-may-2022.

[114] https://blockchain.org.nz/about/our-members/. Both of the authors of this report have links to BlockchainNZ at the time of writing. As at 9 August 2023, both authors are on the Executive Committee of Blockchain NZ and their organisations are members of BlockchainNZ.

BlockchainNZ's members comprise start-ups and SMEs who are blockchain companies, organisations providing professional services to blockchain companies, such as lawyers and accountants, through to large established organisations in traditional sectors who are either using blockchain in part of their activities, piloting blockchain projects or just generally interested in blockchain and its potential.

2018 report

97. The report *Distributed Ledgers and Blockchains Opportunities for Aotearoa New Zealand* was released in December 2018.[115] The report, funded by Callaghan Innovation and Centrality (a blockchain company), documented New Zealand's blockchain industry. A number of the profiled companies are still operating and most have grown since then:

(b) **Techemy** – the Techemy[116] group includes Brave New Coin[117] (a digital currency data and insights business), Techemy Capital[118] (a digital asset investment firm), Dasset[119] (a digital assets exchange), Integrated Identity[120] (an encrypted Covid-19 mobile based tracking solution), Techemy Advisory[121] (a digital asset transaction services business), Blockchain Labs[122] (a specialist blockchain tools business), Techemynt[123] (issuer of a New Zealand dollar stablecoin), and Ocrology[124] (an intelligent mobile optical character recognition business);

(c) **Centrality** – the Centrality[125] group of associated companies is a tech ventures ecosystem that works with smart entrepreneurs and ventures who are trying to disrupt traditional value chains and concepts, and includes businesses such a CENNZnet (a natively permissioned blockchain, providing a secure user experience out-of-the-box), Sylo[126] (a decentralised and end-to-end-encrypted communication network), Centrapay[127] (connection, engagement and payment solutions for businesses and customers), P^werFinance[128] (a digital-led embedded finance platform), Centrapass[129] (a decentralised identity toolkit for future-proof customer sign-up, access and authentication experiences), and numerous others;

(d) **Easy Crypto**[130] – a crypto broking business which offers a fast and easy way to buy and sell a wide range of cryptocurrencies;

(e) **Toha**[131] – an innovative venture-backed start-up looking to establish a New Zealand impact market which will allow the buying and selling of claims backed with verifiable data that

---

115 https://www.callaghaninnovation.govt.nz/sites/all/files/distributed-ledgers-and-blockchains-report-december-2018.pdf.

116 https://techemy.co/.

117 https://bravenewcoin.com/.

118 https://techemy.capital/.

119 https://dassetx.com/.

120 https://integratedidentity.co/.

121 https://techemyadvisory.co/.

122 https://www.blockchainlabs.nz/home.

123 https://www.techemynt.com/.

124 http://ocrology.com/home.

125 https://centrality.ai/.

126 https://sylo.io/.

127 https://centrapay.com/.

128 https://www.powerfinance.co.nz/.

129 https://www.centrapass.com/home.

130 https://easycrypto.com/nz.

131 https://www.toha.nz/.

demonstrate regenerative outcomes on the land such as carbon sequestered, waterways protected or biodiversity enhanced;

(f) **Horizon State**[132] – an electronic ballot box solution;

(g) **Stronghold**[133] – a payment and financial infrastructure firm (enabling simple and powerful payment tools for business); and

(h) **2 Shakes**[134] – customer onboarding automation software.

98. Since the *Distributed Ledgers and Blockchains Opportunities for Aotearoa New Zealand* Report in 2018 other notable uses of blockchain in businesses include:

(a) **Mattr**[135] – a digital identity solution, which was a subsidiary of Spark (the large New Zealand telecommunications company);

(b) **TradeWindow**[136] – provider of digital solutions for exporters, importers, freight forwarders and custom brokers;

(c) **Trust Alliance New Zealand (TANZ)**[137] – a consortium of New Zealand primary producers, growers, exporters, retailers and service providers;

(d) **Carbonclick**[138] – a carbon offset company; and

(e) **Voxels**[139] - an Ethereum based virtual world (a metaverse).

99. The above is not intended to be a comprehensive list – there are many other examples in the market and new players continuing to develop new concepts.

Education

100. Education about blockchain and cryptocurrencies is necessary for a number of reasons. First, the blockchain industry requires advisors, such as accountants and lawyers to be familiar with the technology and the issues arising. Currently most accountants and lawyers have insufficient knowledge to advise the industry and a lack of advisors may harm the development of the blockchain industry in New Zealand. Internationally the need for education amongst professionals has been recognised:

(a) In June 2022 UK accounting firms were warned in that they must prepare "for crypto 'tidal wave' and "an understanding of cryptocurrency and digital assets is no longer optional for advisory firms";[140] and

(b) In January 2022 in the UK, the Rt Hon Sir Geoffrey Vos, the Master of the Rolls—the second in judicial importance to the Lord Chief Justice—stated that due to three major developments, which were imminent, "*every lawyer will require familiarity with the blockchain, smart legal contracts and cryptoassets – both conceptually and functionally*".[141] Those three major

---

[132] https://horizonstate.com/.

[133] https://stronghold.co/.

[134] https://2shakes.co.nz/.

[135] https://mattr.global/.

[136] https://tradewindow.io/.

[137] https://trustalliance.co.nz/.

[138] https://www.carbonclick.com/.

[139] https://www.cryptovoxels.com/.

[140] https://www.accountancyage.com/2022/06/14/uk-accounting-firms-must-prepare-for-crypto-tidal-wave/.

[141] https://www.lawsociety.org.uk/topics/research/blockchain-legal-and-regulatory-guidance-second-edition at page 8.

developments were the launch of CBDCS as they will put cryptoassets into mainstream use; widespread adoption of digital transferable documentation through the use of smart contracts and the move from analogue programmes, such as Word, to machine readable documents, i.e. smart contracts.[142]

101. Second, it is not sufficient for only lawyers to be familiar with blockchain technology, the courts must also be familiar. In June 2022 a law firm in Miami created an NFT that was used to serve court papers on anonymous defendants (a "service token").[143] The NFT could only be used because a New York Supreme Court judge allowed its use to use to serve the papers. The law firm is reported as saying the ability to use the token was successful "*because the judge had taken the time to educate herself on blockchain issues*" In particular, the judge was reported to have gone "*to a conference recently to continue her legal education to become familiar with these technological developments.*"[144] The judge was also reported as saying that "*Judges recognize that if you preside over commercial matters, you will run into cryptocurrency-related issues.*"[145] In July 2022 the High Court of England and Wales also allowed for the serving of legal documents via an NFT.[146]

102. Third, regulators, or at least a number in each agency, must be familiar with the technology and its uses. As CAANZ (Chartered Accountants of Australia and New Zealand) noted in 2017 *"regulators [in New Zealand] acknowledge the need to work closely with blockchain users and developers to better understand the technology as it moves towards large-scale use in the financial services and other industries".*[147]

Environmental Impacts

103. A common criticism of blockchain and cryptocurrencies is the excessive use of electricity required and the resulting harm to the environment.[148] As a recent New Zealand newspaper article titled "How can we address the climate impact of cryptocurrencies?" stated, "*Bitcoin uses more energy that most countries*" and that one Bitcoin transaction uses more than 2,000 kilowatt hours of electricity, the same amount of energy as the average American household uses in 73 days[149] or 61 days, depending on the source.[150] Ethereum, the platform upon which many NFTs are minted on, also faced similar criticism when it was using proof-of-work.[151] While such claims about environment harm are sobering given climate change; they can be misleading and have significant impacts. In early 2022 the WWF (World Wildlife Fund), withdrew from its plan to fundraise through creating and releasing animal themed NFTs.[152] In contrast, an auction of seven NFTs for the Auckland City Mission in January 2022 raised over $1 million NZD for the charity.[153] For the reasons set out below, it is not as simple as saying that the use of blockchain and cryptocurrencies, including NFTs, will irrevocably harm the planet.

---

[142] https://www.lawsociety.org.uk/topics/research/blockchain-legal-and-regulatory-guidance-second-edition.

[143] https://www.law.com/dailybusinessreview/2022/06/09/in-new-approach-big-law-firm-uses-nft-to-serve-court-papers-on-anonymous-defendants/?cmp_share.

[144] https://www.law.com/dailybusinessreview/2022/06/09/in-new-approach-big-law-firm-uses-nft-to-serve-court-papers-on-anonymous-defendants/?cmp_share.

[145] https://www.law.com/dailybusinessreview/2022/06/09/in-new-approach-big-law-firm-uses-nft-to-serve-court-papers-on-anonymous-defendants/?cmp_share.

[146] https://www.coindesk.com/policy/2022/07/13/uk-court-allows-serving-of-suits-via-nfts/.

[147] https://www.charteredaccountantsanz.com/news-and-analysis/insights/research-and-insights/the-regulator-of-2030-regulating-our-digital-future at page 11.

[148] https://www.msnbc.com/opinion/bitcoin-nfts-other-crypto-fads-are-destroying-our-planet-n1261139.

[149] https://www.stuff.co.nz/business/opinion-analysis/300554257/how-can-we-address-the-climate-impact-of-cryptocurrencies.

[150] https://www.marketwatch.com/story/heres-how-many-visa-transactions-can-be-completed-using-the-energy-to-mine-one-bitcoin-11639127573.

[151] https://www.marketwatch.com/story/heres-how-many-visa-transactions-can-be-completed-using-the-energy-to-mine-one-bitcoin-11639127573.

[152] https://theconversation.com/nfts-wwf-tried-raising-money-with-digital-art-but-backtracked-environmental-charities-should-follow-suit-176315.

[153] https://www.newshub.co.nz/home/technology/2022/01/kiwi-nft-project-fluf-world-snoop-dogg-team-up-to-raise-1m-for-auckland-city-mission.html.

104. First, Bitcoin is not indicative of all blockchains. Blockchain uses a consensus system called proof-of-work, which is notoriously electricity hungry. In contrast, most blockchains do not use proof-of-work, instead they use other systems, including proof-of-stake. Because of the significant energy savings, proof-of-stake blockchains are becoming more widely used.[154] Comparing Bitcoin to more modern blockchains is akin to comparing a heavy 1970s gas guzzling car to a small electric car whose owner recharges its battery from solar panels on their roof. The energy requirements for proof of stake are orders of magnitude lower than for proof-of-stake.[155] Ethereum has recently completed its long-signalled process of transitioning to proof-of-stake, which has been estimated to reduce its carbon footprint by 99.99%.[156] After Ethereum's transition to proof-of-stake a transaction on Ethereum is estimated to emit .07 grams of CO_2 only. Currently NFTs minted on other blockchains apart from Ethereum can have the same carbon footprint as a single tweet.[157]

105. Second, bitcoin transactions are increasingly taking place on Bitcoin's Lightning Network.[158] The Lightning Network, a layer two application, sits above the Bitcoin blockchain.[159] Each transaction on the Lightning Network is estimated to consume 0.0000125 kilowatt-hours.[160] So low is the carbon footprint of transactions on the Lightning Network, it is estimated that if the Lightning Network was used to make the equivalent transactions of the VISA, UnionPay, and MasterCard payment networks, the emissions would amount to 1.4 tonnes of carbon annually.[161] To put that into context, a person making a return flight from Wellington to London is responsible for releasing almost 3.5 tonnes of carbon.[162] Thus the use of blockchain may in fact reduce the carbon footprint of our current complex payment systems.[163]

106. Third, all online activities have a carbon footprint. Social media and streaming services are significant carbon contributors.[164] A single tweet on Twitter uses 0.02 grams of CO_2.[165]

107. Fourth, Bitcoin miners can use excess energy and/or electricity, which would otherwise go to waste.[166] Unlike some other forms of energy, electricity is a resource that cannot be stored, unless large (and expensive) batteries are used. Indeed, the generation of excess electricity can disrupt the energy grid.[167] When electricity generation falls to meet demand, bitcoin mining can be stopped awaiting the next time excess electricity is produced. The ability to stop mining and recommence easily is unlike other industries, which either require constant and predictable electricity or experience considerable lags between the decision to stop production and recommencing production.[168] Alternatively some sources of energy that are currently wasted can be tapped to create electricity for bitcoin mining.[169] For example, remote oil wells generate significant amounts of methane, which not economical to transport to refineries. Because of the significant harm of methane

---

[154] https://www.forbes.com/advisor/investing/cryptocurrency/proof-of-stake/#:~:text=There%20are%20currently%20about%2080,Cardano%20(ADA).

[155] https://www.nbcnews.com/tech/tech-news/cryptocurrency-goes-green-proof-stake-offer-solution-energy-concerns-rcna1030.

[156] https://www.nbcnews.com/tech/tech-news/cryptocurrency-goes-green-proof-stake-offer-solution-energy-concerns-rcna1030.

[157] https://tezos.com/non-fungible-token/.

[158] https://www.nasdaq.com/articles/the-state-of-lightning-network-adoption.

[159] https://dci.mit.edu/lightning-network.

[160] https://medium.com/sazmining/the-lightning-networks-energy-use-875b15709214.

[161] https://medium.com/sazmining/the-lightning-networks-energy-use-875b15709214.

[162] This figure was generated by using Air New Zealand's FlyNeural online tool, https://www.airnewzealand.co.nz/loyaltymodule/form/carbon-emissions-offset.

[163] https://theconversation.com/cryptocurrency-nfts-and-the-metaverse-threaten-an-environmental-nightmare-heres-how-to-avoid-it-175761.

[164] https://greenspector.com/en/social-media-2021/.

[165] https://www.payette.com/sustainable-design/what-is-the-carbon-footprint-of-a-tweet/.

[166] See generally, https://www.coindesk.com/policy/2021/10/11/bitcoin-mining-is-reshaping-the-energy-sector-and-no-one-is-talking-about-it/.

[167] https://www.energuide.be/en/questions-answers/why-does-the-electricity-grid-have-to-stay-in-balance/2136/ and https://www.coindesk.com/policy/2021/10/11/bitcoin-mining-is-reshaping-the-energy-sector-and-no-one-is-talking-about-it//.

[168] See generally, https://www.coindesk.com/policy/2021/10/11/bitcoin-mining-is-reshaping-the-energy-sector-and-no-one-is-talking-about-it/.

[169] https://www.coindesk.com/policy/2021/10/11/bitcoin-mining-is-reshaping-the-energy-sector-and-no-one-is-talking-about-it/.

to the atmosphere, it is flared and burnt, however, this does always burn off the methane, thus releasing it to the atmosphere. [170] As an alternative to flaring and burning, the methane can be captured and used in mobile generators with Bitcoin miners located nearby to use that electricity. In North Dakota mobile generators are being used to generate electricity, which is used to mine Bitcoin.[171]

108. Finally, blockchain can be used to assist in developing and supporting measures to reduce climate impact. Various heads of United States government agencies are currently preparing a report on the *"potential uses of blockchain that could support monitoring or mitigating technologies to climate impacts, such as exchanging of liabilities for greenhouse gas emissions, water, and other natural or environmental assets"*.[172]

Digital infrastructure

Technology opportunities and risks

109. Increasingly digital infrastructure is being used in New Zealand and internationally. Digital infrastructure includes the obvious fast and reliable mobile and broad band services as well less obvious ones such as digital identity.[173] The potential cost savings and opportunities of digital infrastructure are significant. The Estonian Government, which is often held up as the poster child for e-government, claims that its e-government infrastructure saves around two percent of its GDP per year.[174] To achieve the United Nations Sustainable Development Goals, it is critical to develop infrastructure and digital infrastructure is a key part of that infrastructure.[175]

110. In common with many governments around the world, the New Zealand Government too has begun its journey on creating and harnessing the benefits of digital infrastructure.[176] Australia also is focused on the provision and facilitation of digital infrastructure,[177] and has identified that if Australia gets digital infrastructure right it will allow it to:[178]

(a) connect people and places;

(b) improve productivity;

(c) increase economic growth;

(d) improve sustainability; and

(e) adopt new technologies.

---

[170] https://www.coindesk.com/policy/2021/10/11/bitcoin-mining-is-reshaping-the-energy-sector-and-no-one-is-talking-about-it/.

[171] https://www.protocol.com/bulletins/exxon-bitcoin-mining-gas-flaring#:~:text=The%2018%20million%20cubic%20feet,more%20potent%20than%20carbon%20dioxide. To be sure, there is a strong argument that oil wells the use of gas in this way is providing oil companies with an additional revenue stream and therefore extending their life span and slowing their transition to renewable energy sources. While oil drilling needs to be limited and stopped, most transport in and to and from New Zealand remains reliant on fossil fuels. The conversion to fully electric transportation will take many years and in the meantime petrol and diesel is required.

[172] https://www.whitehouse.gov/briefing-room/presidential-actions/2022/03/09/executive-order-on-ensuring-responsible-development-of-digital-assets/.

[173] https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/digital-identification-a-key-to-inclusive-growth.

[174] https://oxford.universitypressscholarship.com/view/10.1093/oso/9780198843719.001.0001/oso-9780198843719-chapter-8#:~:text=The%20Estonian%20government%20claims%20that,sector%20in%20a%20calendar%20year.

[175] https://www.weforum.org/agenda/2017/09/governments-develop-digital-infrastructure-vodafone/.

[176] https://www.digital.govt.nz/dmsdocument/193~towards-a-digital-strategy-for-aotearoa/html#creating-a-digital-strategy-for-aotearoa.

[177] https://www.industry.gov.au/data-and-publications/australias-tech-future/digital-infrastructure/why-does-digital-infrastructure-matter.

[178] https://www.industry.gov.au/data-and-publications/australias-tech-future/digital-infrastructure/what-are-the-opportunities-in-digital-infrastructure.

111. Those features would enable:[179]

(a) solving of complex problems;

(b) improving the sustainability of cities;

(c) building new businesses; and

(d) creating new jobs.

112. Governments, however, cannot provide all the digital infrastructure.[180] Instead, as the World Economic Forum and other governments have identified, it is prudent for governments to allow the private sector and others to create and provide digital infrastructure and facilitate the use within New Zealand.[181] To facilitate the provision of digital infrastructure by the private sector, the World Economic Forum identified four things four ways in which governments can assist the private sector in investing in the creation of digital infrastructure:

(a) promote a sustainable commercial environment within which the private sector can flourish;

(b) ensure stability and predictability of the policy environment;

(c) use regulatory best practice; and

(d) seek to stimulate demand for digital solutions.

113. New Zealand has begun the process of allowing the private sector to create the digital infrastructure needed in New Zealand. For example, the Digital Identity Services Trust Framework Bill will allow third parties to provide identity credentials.[182] Thus the Government will no longer be the sole provider of digital identity in New Zealand through RealMe.[183]

114. The use of blockchain technology offers both opportunities as well as risks. The opportunities for New Zealand embracing and facilitating blockchain technology have been pointed out in reports dating back to 2017 and 2018.[184]

115. On a more practical level the New Zealand Government could create online embassies and/or immigration portals where people could speak and interact with New Zealand government officials and/or AI avatars run by Soul Machines.[185] Online embassies and immigration portals would be of immense value to New Zealand, its citizens and others wanting to engage with New Zealand, including obtaining visas. To create and operate an online embassy and/or immigration portal is time consuming and expensive; however, the use of a would reduce the costs. Barbados, for example, is well down the road to creating online embassies in the Metaverse.[186] In addition, visas and other

---

[179] https://www.industry.gov.au/data-and-publications/australias-tech-future/digital-infrastructure/what-are-the-opportunities-in-digital-infrastructure.

[180] https://www.weforum.org/agenda/2017/09/governments-develop-digital-infrastructure-vodafone/.

[181] https://www.weforum.org/agenda/2017/09/governments-develop-digital-infrastructure-vodafone/.

[182] https://www.digital.govt.nz/digital-government/programmes-and-projects/digital-identity-programme/about-the-digital-identity-programme/.

[183] https://www.stuff.co.nz/business/126484354/realme-faces-questions-as-digital-identity-legislation-nears#:~:text=New%20Zealand's%20current%20contribution%20to,to%20Parliament%20later%20this%20year.

[184] https://blockchain.org.nz/wp-content/uploads/sites/28/2018/12/NZ-Unlocking-Blockchains-Potential-Dec-2017.pdf; https://www.callaghaninnovation.govt.nz/sites/all/files/distributed-ledgers-and-blockchains-report-december-2018.pdf and https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3340993.

[185] https://www.soulmachines.com/use-cases/public-sector/.

[186] https://www.bloomberg.com/news/articles/2021-12-14/barbados-tries-digital-diplomacy-with-planned-metaverse-embassy#:~:text=When%20Barbados%2C%20population%20287%2C370%2C%20opens,and%20a%20virtual%20reality%20headset.

documentation could be securely provided to applicants through the use of NFTs, thus they could not be forged or otherwise duplicated. Dubai is another government with a presence in the metaverse.[187]

116. As with any IT technology there are risks. One of the primary risks concerns the use of cryptocurrencies to launder money.[188] Money laundering, however, is not unique to cryptocurrencies. The United Nations has estimated that between 2 – 5% of the world's GDP (between $800 - $2 trillion USD) is laundered through traditional banks and other financial institutions.[189] Just as most bank transactions are legitimate, the vast majority of cryptocurrency transactions are for legitimate purposes.[190]

117. Another risk is the use of blockchain and cryptocurrencies to scam people and organisations.[191] Again, scams are not unique to blockchain and cryptocurrencies.[192] Indeed, some of the blockchain/cryptocurrency scams do not actually involve the use of cryptocurrencies, rather people are purporting that they are using blockchain, such as the One Coin scandal.[193]

118. Not using blockchain to build/provide digital infrastructure for New Zealand or facilitating others to build and provide infrastructure poses risks. Failing to adopt and/or facilitate the use of blockchain and cryptocurrencies will see New Zealand fall behind countries such as Australia and the UK who are pitching themselves respectively as a "global hub for cryptoasset technology and investment" (UK)[194] and a "Technology and Financial Centre" (Australia).[195] Even if New Zealand has no desire to become a financial centre or global hub for cryptoasset investment, at the very least it can use the technology within New Zealand and export it. Such exports would be weightless and are required given the justifiable increasing focus on climate change and the need to diversify away from agriculture and tourism.

Impact of quantum computing upon all of New Zealand's digital infrastructure

119. A concern about blockchain and cryptocurrencies in general is that cryptocurrencies and their use of public key cryptography are particularly susceptible to quantum computing. The argument is that once quantum computing becomes sufficiently developed and powerful it could be used to render cryptocurrencies worthless.[196] As one commentator has said, "*When public key cryptography is broken, users could be losing their funds and the whole system will break*."[197]

120. While is correct that cryptocurrencies and other uses of blockchain could be compromised by quantum computing, the threat posed by quantum computing is not limited to cryptocurrencies and other uses of blockchain. Many, if not most, industries also use encryption that is susceptible to hacking through the use of quantum computing. For traditional banks and other financial organisations, "*quantum computers pose an existential threat to banks' cybersecurity infrastructure and the sensitive data they hold.*"[198] Other industries seemingly less reliant on cryptography are just as vulnerable, such as critical infrastructure including power plants and water:[199] "*the predicted*

---

[187] https://coincentral.com/dubais-vara-to-establish-worlds-first-metaverse-hq-in-the-sandbox/.

[188] https://www.cognyte.com/blog/anti-money-laundering-cryptocurrency/#.

[189] https://www.unodc.org/unodc/en/money-laundering/overview.html.

[190] Chainanalysis estimates in its 2022 Crypto Crime Report that only 0.62% of cryptocurrency transactions by volume were for illicit purposes: https://blog.chainalysis.com/reports/2022-crypto-crime-report-introduction/.

[191] https://www.ftc.gov/news-events/data-visualizations/data-spotlight/2022/06/reports-show-scammers-cashing-crypto-craze and see https://blog.chainalysis.com/reports/2022-crypto-crime-report-introduction/

[192] https://besedo.com/knowledge-hub/blog/the-evolution-of-online-scams-moderation-methods/.

[193] https://www.theguardian.com/tv-and-radio/2019/nov/04/the-missing-cryptoqueen-the-hunt-for-a-multi-billion-dollar-scam-artist.

[194] https://www.gov.uk/government/news/government-sets-out-plan-to-make-uk-a-global-cryptoasset-technology-hub.

[195]https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Financial_Technology_and_Regulatory_Technology/AusTechFinCentre/Final_report.

[196] https://www.investmentmonitor.ai/tech/quantum-computing-bitcoins-crypto-encryption#:~:text=Quantum%20computers%20will%20eventually%20break,to%20a%20study%20by%20Deloitte.

[197] https://www.cnet.com/personal-finance/crypto/cryptocurrency-faces-a-quantum-computing-problem/.

[198] https://www.itproportal.com/features/when-it-comes-to-quantum-computers-security-should-come-first-for-financial-institutions/.

[199] https://www.darkreading.com/vulnerabilities-threats/-harvesting-attacks-the-quantum-revolution.

fallout of quantum computer systems so extreme it's referred to as the Quantum Apocalypse".[200] The hacking of cryptocurrencies and other blockchain applications through quantum computing will be the least of most organisations and people's concerns. Fortunately, considerable work is being undertaken in post quantum cryptography, that is cryptography that can be used to defeat quantum computing attacks.[201]

Access to banking services

121. For many years businesses in New Zealand dealing with cryptocurrencies have reported difficultly in accessing or retaining bank accounts.[202] Operating a business in New Zealand without access to banking services, such as a bank account, is difficult. And as the *Distributed Ledgers and Blockchains Opportunities for Aotearoa New Zealand Report*, noted: [w]ithout access to banking services, it is likely the New Zealand blockchain industry will remain stunted despite other interventions.[203]

122. The decision of a bank to close a customer's bank account is called "de-banking" and is not unique to businesses dealing with cryptocurrencies.[204] Concerns over AML/CFT and the banks' obligations under the AML/CFT Act are normally cited by the banks in their refusal to provide or continue to provide banking services. As the MoJ noted in its 2021 *Review of the AML/CFT Act*, businesses were being de-banked "*because banks would rather avoid rather than manage the risk of having the business as a customer*."[205] Australian businesses also report similar difficulty.[206] In November 2021, the Australian regulator Australian Transaction Reports and Analysis Centre (**AUSTRAC**) issued a warning to banks against large-scale de-banking of their customers from dealing in cryptocurrencies.[207]

123. Counterintuitively, the practice of refusing to bank and de-banking legitimate business can increase harm, rather than reduce it. As AUSTRAC in Australia noted, the consequences of de-banking organisations providing legitimate and lawful financial services can be to "*increase the risks of money laundering and terrorism financing and negatively impacts Australia's economy*." Such is the prevalence and concern over de-banking in Australia that the Australian Senate Report devoted a chapter to de-banking.[208] The wide-ranging discussion of de-banking in the Australian Senate Report documented many instances of de-banking and the associated harm, including businesses forced to close through the removal of a bank account. The Australian Competition and Consumer Commission (ACCC) was noted to be concerned about potential anti-competitive behaviour of the banks in refusing to deal with cryptocurrency exchanges.[209]

124. Not all businesses in New Zealand dealing with cryptocurrencies have experienced difficulties of obtaining a bank account or de-banking. However, the fact that some have secured and successfully retained bank accounts does not mean that all businesses have been as fortunate.

125. Difficulties accessing bank accounts is not limited to businesses dealing with cryptocurrencies. Money remitters, who assist people sending money to family in the Pacific Islands, have faced

---

[200] https://nznews.upexampaper.com/governments-next-big-task-avoiding-the-quantum-computing-pitfall-more-nz-today-news/.

[201] https://data61.csfiariro.au/en/Our-Research/Our-Work/The-quantum-secure-cryptography-of-tomorrow.

[202] Submission by Stace Hamond Lawyers.

[203] https://www.callaghaninnovation.govt.nz/sites/all/files/distributed-ledgers-and-blockchains-report-december-2018.pdf.

[204] https://www.nzherald.co.nz/business/kiwibank-in-high-court-over-blanket-ban-policy/VKPRD7DUCMBMFGLA3GVRMBT3CE/ and https://www.nzherald.co.nz/business/businesses-denied-banking-services-as-banks-tighten-up-who-can-have-an-account/BB2NGQXAXQ62RMVRQ67YBBEXDM/.

[205] https://www.justice.govt.nz/assets/Documents/Publications/AMLCFT-Statutory-Review-Consultation-Document.pdf at page 7.

[206] Submission by Stace Hamond Lawyers.

[207] https://www.smh.com.au/business/banking-and-finance/devastating-impact-austrac-warns-banks-against-ditching-crypto-dealers-20211109-p597b2.html.

[208] https://parlinfo.aph.gov.au/parlInfo/download/committees/reportsen/024747/toc_pdf/Finalreport.pdf;fileType=application%2Fpdf at pp 83 – 115.

[209] https://parlinfo.aph.gov.au/parlInfo/download/committees/reportsen/024747/toc_pdf/Finalreport.pdf;fileType=application%2Fpdf at [4.95]-[4.96].

considerable difficulties accessing bank accounts.[210] The High Court case *Ink Patch Money Transfer Ltd v Reserve Bank of New Zealand*[211] concerned the issue of New Zealand banks closing down bank accounts and refusing to open new bank accounts for money remitters. The applicants sought judicial review against the RBNZ and the Minister of Finance on a range of grounds. Those grounds included first that the RBNZ's guidance that money remittance was a high risk activity in terms of AML/CFT compliance was not a correct interpretation of the AML/CFT Act. Second the RBNZ should have issued a direction under the Reserve Bank Act to the banks that they were not acting in a prudent manner because of the difficulties money remitters faced with obtaining and retaining bank accounts. The judicial review was unsuccessful as the banks were found to be acting within their requirements under the AML/CFT Act and the RBNZ had not acted improperly.

126. The failure of the judicial review in *Ink Patch Money Transfer Ltd v Reserve Bank of New Zealand* and the continued harm to vulnerable consumers—increased costs and time when remitting money to family members in the Pacific Islands—has led to calls for urgent law reform in this area.[212]

Regulatory challenges

Definitional issues

127. Despite growing literature and regulatory commentary on digital assets, there is no shared understanding of terminologies in New Zealand and internationally. A cross-country review of fintech policies by the Financial Stability Institute of the Bank for International Settlements stated that "*the lack of a common categorisation of cryptoassets is one of the most important challenges when considering a regulatory approach*".[213]

128. The Organisation for Economic Co-operation and Development (**OECD**) appropriately summarises the challenges of a lack of consistent terminology:[214]

> *The terms used by policy makers evolve in parallel with the development of technologies and the rapidly changing business models. As with other financial products, and in order to maintain the technology-neutral approach to regulation, the majority of definitions used by regulators do not explicitly mention the underlying technology that enables the creation of a new type of asset, but rather focus on the underlying economic function (e.g. payment vs. security tokens), in order to appropriately evaluate the financial instrument and digital asset from their regulatory standpoint. Nevertheless, having a somehow common understanding of terminology might at some point prove useful given the global, cross-border nature of DLT-based markets, not least so as to help limit potential regulatory arbitrage.*

129. The Australian Senate Report recognised the difficulties inherent in different terminologies and recommended that a "token-mapping exercise" be undertaken "*to determine the best way to characterise various types of digital asset tokens in Australia*."[215] At the time of writing, the Australian Treasury is conducting the token mapping exercise and expects to complete it by the end of 2022.[216]

Securities laws

130. Securities laws and regulations have been a key area of uncertainty for digital assets worldwide. There has been much focus on the United States approach to the issue of whether a particular coin

---

[210] https://www.stuff.co.nz/business/128777513/always-on-the-lookout-antimoney-laundering-laws-have-made-money-transfers-to-the-pacific-unsafe?rm=a and https://www.stuff.co.nz/business/128903733/no-relief-for-backpack-cash-carriers-as-court-rejects-plea-for-bank-accounts-from-pacific-island-money-remittance-companies.

[211] [2022] NZHC 1340.

[212] https://www.minterellison.co.nz/our-view/high-court-upholds-reserve-banks-approach-to-money-remitters.

[213] https://www.bis.org/fsi/publ/insights23.htm. See also paragraph 5.1 of https://www.oecd.org/daf/fin/financial-markets/Regulatory-Approaches-to-the-Tokenisation-of-Assets.pdf.

[214] https://www.oecd.org/daf/fin/financial-markets/Regulatory-Approaches-to-the-Tokenisation-of-Assets.pdf at [5.1].

[215] https://parlinfo.aph.gov.au/parlInfo/download/committees/reportsen/024747/toc_pdf/Finalreport.pdf;fileType=application%2Fpdf at [6.28].

[216] https://treasury.gov.au/sites/default/files/2022-03/c2022-259046.pdf.

or token constitutes a "security" and therefore falls within the jurisdiction of the Securities and Exchange Commission (**SEC**), following the initial report of the SEC on the DAO.[217]

131. Clearly, regulators worldwide have a mandate to protect consumers who may be attracted to invest in opportunities that they do not fully understand (at best) or which are poorly conceived or (at worst) fraudulent. However, uncertainty as to treatment or rules which are not fit-for-purpose can equally make it difficult for new innovations to get off the ground.

132. The same issue is replicated in each jurisdiction where a given coin or token is offered or available. Given these are digital assets, the ability of the technology to permit easy global offerings and transacting can be contrasted against the immediate complexity of multiple jurisdictions with different legislation and rules.

New Zealand's current approach is discussed below, and options and recommendations are included in Part 3.

Licensing and supervision of entities

133. Where securities laws focus on the offer of a financial product, jurisdictions will also regulate the providers of financial services associated with regulated products, through licensing and registration regimes.

134. Internationally there have been developments relating to the licensing of digital asset related services. The Australian Government, through The Treasury, consulted in March 2022 to May 2022 to propose the creation of a licence for cryptocurrency exchanges.[218] New York has its BitLicence which licenses a range of cryptocurrency organisations (including those transmitting cryptocurrency, buying and selling cryptocurrency as a business, providing exchange services to customers and issuing cryptocurrency).

135. However, many have argued that measures like the BitLicence have negatively affected both businesses and consumers by limiting the trading options in cryptocurrencies. The costs to pursue a BitLicence and the time, legal fees and other costs involved have been unaffordable for start-ups, with only sector giants being able to survive with these requirements.[219] An academic has also argued that licensing cryptocurrency exchanges could have unintended risks such as concerns around the use of untethered, non-convertible, illiquid and volatile settlement assets for settlement purposes in cryptocurrency exchanges, and risks associated with the finality of settlements arising from the "probabilistic finality" found in some cryptocurrency blockchains.[220]

136. From a supervisory perspective, it has been difficult to supervise digital assets generally and especially in relation to AML/CFT. In fact, the Financial Conduct Authority (**FCA**) (the United Kingdom's financial markets regulator) issued a supervisory notice to Binance, one of the world's largest cryptocurrency exchanges, banning Binance from undertaking any regulated activity in the United Kingdom. The FCA considered Binance was "*not capable of being effectively supervised*" and that Binance being a part of a global group "*offers complex high-risk financial products, which pose a significant risk to consumers*".[221]

137. There is a need for innovation in supervisory approaches, such as using blockchain and other innovative solutions in order to keep up with the businesses that they supervise.[222]

---

[217] https://www.sec.gov/litigation/investreport/34-81207.pdf.

[218] https://treasury.gov.au/consultation/c2022-259046.

[219] https://www.coindesk.com/policy/2021/10/19/kill-the-bitlicense/.

[220] https://core.ac.uk/download/pdf/188951277.pdf.

[221] https://www.fca.org.uk/publication/supervisory-notices/first-supervisory-notice-binance-markets-limited.pdf.

[222] https://complyadvantage.com/insights/state-of-supervision-of-cryptoassets/.

New Zealand's current approach is discussed below, and options and recommendations are included in Part 3.

Implementation of anti-money laundering and countering financing of terrorism rules

138. Digital assets and associated businesses are under scrutiny in the fight against money laundering and the financing of terrorism.

139. A global and consistent approach is being led by trans-national institutions such as the Financial Action Task Force (**FATF**). according to FATF: [223]

> *New technologies, products, and related services have the potential to spur financial innovation and efficiency and improve financial inclusion, but they also create new opportunities for criminals and terrorists to launder their proceeds or finance their illicit activities. The risk-based approach (RBA) is central to the effective implementation of the revised Financial Action Task Force (FATF) International Standards on Combating Money Laundering and the Financing of Terrorism and Proliferation, which FATF members adopted in 2012, and the FATF therefore actively monitors the risks relating to new technologies. The monitoring of emerging risks, including the risks relating to new technologies, should inform the risk assessment process of countries and obliged entities and, as per the RBA, should guide the allocation of resources as appropriate to mitigate these risks.*

140. Each member country of FATF must incorporate FATF principles in its home legislation in order to ensure a seamless and globally consistent network and record of transactions and identities to aid in the fight against financing illicit activities.

141. Each country's laws will impose variants of these requirements (e.g. customer due diligence (**CDD**)/know-your-customer (**KYC**) rules) on entities within their jurisdiction. The friction produced by these rules, however, often compromise the simplicity of transacting using digital means, at least until technological solutions (e.g. new forms of instantly verifiable digital identity) make it easier.

New Zealand's current approach is discussed below, and options and recommendations are included in Part 3.

Sanctions

142. Sanctions are closely tied to AML/CFT. Sanctions are tools that are used against foreign governments and individuals in response to threats to international peace and security. Examples include economic sanctions and travel bans.

143. Sanctions are the subject of increased attention in the digital asset industry. The same anonymity and ease of creation makes digital assets ideal for persons to receive payments that might otherwise trigger terrorism financing or sanctions red flags.[224]

144. Over the years, designated sanctioned persons and services have used cryptocurrencies to circumvent sanctions. For example, Iran announced a national plan to mine Bitcoin and licence cryptocurrency mining farms. In 2018, the Venezuelan Government attempted to establish its own national cryptocurrency, the Petro, to evade economic and trade sanctions imposed by the United States.

145. Recently, the Treasury Department's Office of Foreign Assets Control (**OFAC**), the United States agency that administers and enforces economic and trade sanctions in support of United States' national security and foreign policy objectives, issued its first sanction on a virtual currency mixer

---

[223] https://www.fatf-gafi.org/media/fatf/documents/recommendations/Updated-Guidance-VA-VASP.pdf.

[224] https://www.nortonrosefulbright.com/en/knowledge/publications/c75d44c5/sanctions-evasion-in-the-crypto-asset-economy.

Blender.io. The Democratic People's Republic of Korea uses Blender.io to support malicious cyber activities and money-laundering of stolen cryptocurrencies.[225]

146. As a general rule, most non-United States businesses and persons also comply with United States imposed sanctions (and requirements) as they do not want to run the risk of being black-listed.

147. Historically, New Zealand's position was not to have an autonomous sanctions regime. This changed with the introduction of the Russa Sanctions Act 2022 in response to Russia's invasion of Ukraine. The Russia Sanctions Act enables New Zealand to impose economic sanctions on specific people, companies, assets and services in Russia. Cryptocurrency is an example of an asset and services relating to cryptocurrency is an example of services captured.

148. Towards the end of 2021, OFAC in the United States, published tailored guidance for the digital asset industry, highlighting that sanctions requirements and industry specific advice regarding OFAC's compliance expectations.[226] However, as the International Bar Association observes, implementing a sanctions compliance programme to account for risks posed by digital assets is challenging.[227] The challenges in relation to digital assets that are subject to OFAC's blocking requirements include:[228]

(a) screening counterparties and beneficiaries, tracing source of funds, and freezing those digital assets; and

(b) difficulties in blocking the digital assets of an 'un-hosted' wallet—wallets where the user controls the funds, as compared to 'hosted' wallets that are typically controlled by third parties such as exchanges—as the relevant financial institution might not have sufficient access to the digital assets in order to freeze them.

Custody of digital assets

149. Digital assets are intangible and are generally held in electronic "wallets". Questions of ownership and control of these assets are crucial to greater understanding and use of digital assets.

150. Digital assets can be held in two main ways; self-custody (an individual storing and holding their own private keys by keeping it on an offline hardware or paper wallet); or third-party custody (such as a custodial exchange or cryptoasset specific custodian). There are risks with self-custody because if the individual loses or forgets the private key, they lose the digital assets associated with the key.

151. Traditionally, a client's assets would be stored either in a physical form (like a vault) or in an electronic form (like a share register), with the custodians required by law to hold these assets and return them upon request.

152. While the function of a custodian of digital assets is similar to traditional custodians, digital assets have a different risk level and use different safekeeping methods. For digital assets such as cryptoassets, it is cryptographic keys, specifically the private key that needs to be secured and protected. Both the private key (unique pattern like a pin number that is only known to the cryptoasset holder)[229] and public key (publicly available pattern like a bank account number so transfers can happen) must be matched for a transaction to be executed. Whoever holds the private key effectively controls the cryptoasset, and if it gets compromised, those cryptoassets can be effectively lost with little prospect of recovering them. The loss of a private key will also result in losing the cryptoassets as there is no central entity, such as a bank to recover the private key from.

---

[225] https://home.treasury.gov/news/press-releases/jy0768.

[226] https://home.treasury.gov/system/files/126/virtual_currency_guidance_brochure.pdf.

[227] https://www.ibanet.org/article/BDF997FB-EB79-498A-88F5-C6CEACF7DDD9.

[228] https://www.ibanet.org/article/BDF997FB-EB79-498A-88F5-C6CEACF7DDD9.

[229] Private keys, however, unlike standard pin numbers comprise both numerals and upper and lower case numbers and are normally 64 characters long, which makes them difficult to remember. To aid recall, a mnemonic phrase of 12 or 24 words can often be used.

153. When custodians hold digital assets they can hold assets in one of two main ways. First, they hold each customers' digital assets independently. That is, the customer sends the custodian the digital assets and they are kept in a wallet (or a series of wallets), which hold only that customer's digital assets. Second, the custodian pools their customers' digital assets into wallets containing the digital assets of many customers.

154. In 2019, Cryptopia, a New Zealand cryptocurrency exchange, experienced a hack which resulted in NZD 30 million worth of digital assets stolen from investors.[230] Cryptopia was considered a custodian in the sense that it held clients' digital assets on trust. As a custodian, Cryptopia should have had more robust security standards to safeguard client's digital assets. Cryptopia's failure gives immediacy to the role of custodians in the age of digital assets, the custodian legal regime and its ability to accommodate new technology.[231]

155. The Cryptopia hack demonstrated poor digital asset safeguarding practices. The hack involved shuffling of small amounts of funds into different exchanges and Cryptopia's loss of access to its Ethereum wallets suggests the hacker had gained access to Cryptopia's single server, downloaded or copied the private keys, and then deleted them.[232]

156. The Cryptopia hack also raises highlights the lack of investor protection. The lack of protection is because of regulatory gaps. While Cryptopia acted as a custodian, it was not captured under the relevant custodian laws in New Zealand of providing a client money or client property service because the digital assets that it dealt with were not financial products under the Financial Markets Conduct Act 2013 (**FMCA**). This meant that Cryptopia did not have to comply with record keeping, reporting, reconciliations, assurance engagement, and general custodian conduct obligations under the FMCA. However, it is arguable that the statutory protections would only have been useful in relation to traditional client money or client property, as opposed to digital assets (which was the subject here).

157. The primary threats behind such hacks are external attacks from outsiders breaking into the system, rogue insiders who misuse private keys, and operational failures that include human error and technical issues.[233]

Consumer protection

158. Consumer protection risks arising from digital assets and digital asset related services have been described throughout this report, including in the themes of submissions in Part 1 above.

159. The risks around investor protection are a key concern for the FMA. The FMA has published information (including carrying out social media campaigns) to help investors who are considering investing in cryptocurrencies. The FMA also publishes information for potential investors for many other types of investments.

160. The FMA receives regular complaints about cryptocurrency-related scams, which are often likely to be scams posing as cryptocurrency opportunities and publishes information about warning signs of scams at https://www.fma.govt.nz/investors/scams/. In its submission, the FMA reporting receiving 60 misconduct reports in this area for the year ending 30 June 2021. The FMA acknowledges the global nature of these frauds and scams and publishes warnings and alerts on offers from overseas jurisdictions as well as when international regulators issue warnings.[234]

---

[230] *Ruscoe v Cryptopia Limited (in liquidation)* CIV-2010- 409-000544 [2020] NZHC 728. For disclosure of interest, one of the Advisers, Jeremy Muir, and their firm MinterEllisonRuddWatts, acted for Cryptopia prior to its hack.

[231] Shaanil Senarath-Dassanayake "The Custody of Crypto-Assets in New Zealand" (LLB (Hons) Dissertation, University of Auckland, 2019), at [7]. For disclosure of interest, one of the Advisers, Alexandra Sims, supervised this research paper.

[232] Shaanil Senarath-Dassanayake "The Custody of Crypto-Assets in New Zealand" (LLB (Hons) Dissertation, University of Auckland, 2019), at [19]. For disclosure of interest, one of the Advisers, Alexandra Sims, supervised this research paper.

[233] See https://tovadvorin.medium.com/what-bitpoint-teaches-us-about-cryptocurrency-exchange-hacks-1aea73fde261.

[234] https://www.fma.govt.nz/news-and-resources/warnings-and-alerts/.

161. However, as mentioned earlier, we consider that consumers cannot be fully protected if regulators do not know what they are protecting consumers from—regulators need to educate themselves in the technology and, as one submission recommended, use it in practice to understand its nuances.

162. Finally, it must be remembered that scams are not unique to cryptocurrencies. Scams existed well before cryptocurrencies and many scams continue to occur that have no relationship to cryptocurrencies.

Dispute resolution

163. Given the global environment in which cryptocurrency and other blockchain applications operate, cryptocurrency disputes are inherently cross-border by nature. Disputes have increased over recent years. The global nature of such disputes means that conflicts of laws issues are common.[235]

164. The Binance class action arbitration highlights just one technical challenge of international cryptocurrency disputes.[236] Binance, a VASP, which and can hold its clients' cryptocurrency as a custodian, had a series of outages in 2020. The outages prevented some clients from selling their cryptocurrencies while prices were falling and they sustained significant losses. The user terms were unclear as to the Binance entity investors contracted with as there was simply a generic reference to "Binance operators". This lack of specificity means parties may have difficulties commencing arbitration against the correct party to the arbitration agreement or even whether the dispute could be arbitrated at all.

165. The ability to freeze the status quo pending the issuance of an award is important. English law[237] (and Hong Kong and Singapore law) now also provides that proprietary injunctions can prohibit counterparties from dealing with, disposing of or diminishing the value of relevant cryptocurrencies where there is a dispute of ownership.[238] The volatility of cryptocurrencies is recognised in the English decision of *Tulip Trading Ltd v Bitcoin Association for BSV & Ors*,[239] where cryptocurrencies were not considered good security for costs in a dispute, adopting the view that a potential fall in the value of the cryptocurrencies would render these ineffective security.

166. However, it is difficult to prevent the dissipation of cryptocurrencies in an given the ease in which they can be transferred, converted into fiat currency, disposed, or dissipated to anonymous or unknown users.[240]. For example, users may take advantage of enhanced encryption which makes cryptocurrencies difficult to track, such as coin mixer platforms which swap and mix groups of cryptocurrency transactions together to obscure any paper trail with a mix of user addresses and transaction histories. In addition, wallets can also be owned by people who are only acting as an agent to facilitate cryptocurrency transactions with no record of the identities of the true parties behind the transaction.[241] This is, however, no different from agency and nominee arrangements used in other (non-crypto) contexts.

International reach

167. Digital assets have global reach, making it easier for easier cross-border interactions. However, the mostly borderless nature of blockchain and digital assets can make it difficult to resolve disputes when they arise.

168. The law typically applies depending on where the relevant property is situated, where activities originated or where a party (e.g. a customer) is located. In most cases, participants in transaction will define their choice of governing law in an agreement, but the enforceability of such agreements in

---

[235] https://www.withersworldwide.com/en-gb/insight/key-issues-in-international-arbitration-of-cryptocurrency-disputes.

[236] https://www.martindale.com/legal-news/article_withers-bergman-llp_2554850.htm.

[237] *Aa v Persons Unknown* [2019] EWHC 3556 (Comm), *Elena Vorotyntseva v Money-4 limited and others* [2018] EWHC 2596 (Ch).

[238] https://www.withersworldwide.com/en-gb/insight/key-issues-in-international-arbitration-of-cryptocurrency-disputes.

[239] [2022] EWHC 2 (Ch).

[240] https://www.withersworldwide.com/en-gb/insight/key-issues-in-international-arbitration-of-cryptocurrency-disputes.

[241] https://www.withersworldwide.com/en-gb/insight/part-2-key-issues-in-international-arbitration-of-cryptocurrency-disputes.

relation to blockchain nodes located in jurisdictions outside that of the chosen governing law can be unclear.

169. Enforcement of judgements or regulatory actions against parties that are based in jurisdictions that do not have cooperation agreements with the local regulator is complicated.[242]

170. The OECD particularly notes that:

> *… it may be difficult to define the jurisdiction of a public permissionless Blockchain, as the decentralisation inherent in the model, as well as the subsequent disintermediation, make it difficult to point to an identifiable party that performs the regulated activity.*

International regulatory approaches

171. Internationally, regulators have taken a number of different approaches often combining elements of each, and evolving over time. We identify four main versions below:

The "Wait and see" approach[243]

172. The "wait and see" approach involves not issuing specific regulation, including guidelines, on the digital asset industry to allow for its development. It usually combines existing laws and regulations with close monitoring, which leads to the timely development of a regulatory framework that addresses potential risks. Its aim is to avoid stifling innovation in the early stages, but to remain attentive and ready to act if and when required to preserve stability, among other needed variables.

173. New Zealand is an example of the "wait and see" approach. Despite the absence of crypto-specific laws or regulations, cryptocurrency entities can operate based on pre-existing laws and regulations applicable to the financial sector. However, as discussed throughout this report, the "wait and see" approach has its flaws.

Balanced/risk-proportionate approach[244]

174. The balanced/risk proportionate approach involves a collaborative engagement between policy-makers, regulators and the private sector working together through task forces and/or innovation hubs on the design and implementation of laws and regulations that aim to develop an inclusive and innovative financial system.

175. By using this approach, regulators tend to develop a better understanding of the innovators and adapt quickly to the fast-paced nature of the environment, while businesses often find it easier to adjust more quickly to regulators' concerns to protect the reputational integrity and value of the ecosystem.

176. Singapore and the European Union have opted for a balanced approach. The Monetary Authority of Singapore (**MAS**) is taking a collaborative, risk-proportionate approach to blockchain, and has launched a regulatory sandbox where fintechs, banks and regulators work together.[245] In addition, MAS has developed a payments service framework to ensure AML/CFT compliance for companies involved in the dealing or exchange of cryptocurrencies. The European Central Bank formed a task force on distributed ledgers and launched a joint research project with the Bank of Japan.[246] The European Commission launched the EU Blockchain Observatory and Forum to gather information

---

[242] Paragraph 5.3 of https://www.oecd.org/daf/fin/financial-markets/Regulatory-Approaches-to-the-Tokenisation-of-Assets.pdf.

[243] https://www3.weforum.org/docs/WEF_Navigating_Cryptocurrency_Regulation_2021.pdf. See also https://www.thomsonreuters.com/en-us/posts/wp-content/uploads/sites/20/2022/04/Cryptos-Report-Compendium-2022.pdf.

[244] https://www3.weforum.org/docs/WEF_Navigating_Cryptocurrency_Regulation_2021.pdf. See also https://www.thomsonreuters.com/en-us/posts/wp-content/uploads/sites/20/2022/04/Cryptos-Report-Compendium-2022.pdf.

[245] https://www.mas.gov.sg/development/fintech/regulatory-sandbox.

[246] https://www.ecb.europa.eu/press/key/date/2016/html/sp161206.en.html.

from EU members on use cases, and engage experts and practitioners before formulating concrete policies.[247]

Comprehensive regulatory approach[248]

177. The comprehensive regulatory approach requires designing and implementing specific regulation to govern activities conducted by the regulated entities. This typically comprises licensing requirements, such as reporting and AML/CFT obligations, to provide financial services and foreign exchange restrictions for cross-border transfers, among others.

178. Examples include Switzerland, Japan and New York. At the level of the EU, the Markets in CryptoAssets (MiCA) Regulation will provide Europewide regulations for cryptoassets.

Restrictive approach[249]

179. The restrictive approach entails imposing broad restrictive measures that affect the market generally. This may be based on a more conservative or precautionary view and/or may derive from a specific market experience or event.

180. Countries that have proposed and event implemented bans due to concerns about fraud and AML/CFT risks include Turkey, India, China and Nigeria, among others. Such determinations are within the ambit of the respective countries. However, adopting definitive legislation at an early stage and in a broad manner may be premature and affect innovation which could be of the interest of these countries.

We explore the approaches of certain key jurisdictions further in Appendix 2

Current New Zealand legislative and regulatory approach to digital assets

Introduction

181. In this section, we consider how New Zealand law currently applies to digital assets, by considering:

(a) key existing legislation; and

(b) the approach of key regulatory bodies.

182. There are no legislative regimes in New Zealand directly targeted at digital assets. At the time of writing[250] only three pieces of legislation refer, either directly or by way of example, to cryptocurrencies in New Zealand: two are tax-related[251] and one is the Russia Sanctions Act 2022.

183. Similarly to the approach to date in jurisdictions such as the United States, United Kingdom and Australia, the treatment of digital assets and related activities falls, therefore, to be dealt with under existing rules and regimes.

Financial Markets Conduct Act 2013

184. New Zealand's primary financial markets statute is the Financial Markets Conduct Act 2013 (**FMCA**). The FMCA may apply where digital assets have the characteristics of an investment, although not all

[247] https://www.eublockchainforum.eu.

[248] https://www3.weforum.org/docs/WEF_Navigating_Cryptocurrency_Regulation_2021.pdf. See also https://www.thomsonreuters.com/en-us/posts/wp-content/uploads/sites/20/2022/04/Cryptos-Report-Compendium-2022.pdf.

[249] https://www3.weforum.org/docs/WEF_Navigating_Cryptocurrency_Regulation_2021.pdf. See also https://www.thomsonreuters.com/en-us/posts/wp-content/uploads/sites/20/2022/04/Cryptos-Report-Compendium-2022.pdf.

[250] Drafted on 10 May 2022.

[251] Income Tax Act 2007, and Goods and Services Tax Act 1985.

investments are captured (e.g. traditional activities such buying residential property or art are generally not caught).

185. The primary purposes of the FMCA are to:[252]

(a) promote the confident and informed participation of businesses, investors, and consumers in the financial markets; and

(b) promote and facilitate the development of fair, efficient, and transparent financial markets.

186. The FMCA also has the following additional purposes:[253]

(a) to provide for timely, accurate, and understandable information to be provided to persons to assist those persons to make decisions relating to financial products or the provision of financial services;

(b) to ensure that appropriate governance arrangements apply to financial products and certain financial services that allow for effective monitoring and reduce governance risks;

(c) to avoid unnecessary compliance costs; and

(d) to promote innovation and flexibility in the financial markets.

187. The FMCA addresses these purposes by regulating: "fair dealing" by market participants; disclosure rules for offers of "financial products"; governance of offers of debt securities and managed investment products, rules around dealing on secondary markets; licensing of "market service" providers; financial advice rules, client money or property service rules; financial reporting requirements; and other matters.

188. The FMA is the regulator responsible for the FMCA.

See our discussion of the FMA's approach from paragraph 213 below.

Financial products

189. Key to the application of the FMCA are the definitions of "financial product" and "financial advice product". These are broadly as follows: [254]

Financial products	**Financial advice products**
Debt securities	Financial products (see left hand column)
Equity securities	A discretionary investment management service (DIMS)
Management investment product	Contracts of insurance
Derivatives	Consumer credit contracts
	Any other product declared by the regulations to be a financial advice product

[252] FMCA, section 3.

[253] FMCA, section 4.

[254] FMCA, sections 6 and 7.

190. The financial product definitions are designed to provide clarity as to whether a particular product or arrangement falls within the definition or not.

191. The potential for products or arrangements to be designed to fall outside regulation (or to be of such a new kind that they do not fit the definitions) is mitigated by the FMA's call-in power. The FMA has the ability to designate a "security" (defined below) as one of the above classes of financial product. It cannot, however, do this retrospectively.[255]

Security
An arrangement or a facility that has, or is intended to have, the effect of a person making an investment or managing a financial risk. It includes a financial product, any interest or right to participate in any capital, assets, earnings, royalties, or other property of any person, and any interest in, or right to be paid, money that is, or is to be, deposited with, lent to, or otherwise owing by, any person (whether or not the interest or right is secured by a charge over any property). It does not include any interest or right that is declared by regulations not to be a security for the purposes of this Act.

192. Unless the FMA has exercised its power to designate certain digital assets into a class of financial product, many of the rules in the FMCA will simply not apply to the digital assets which do not meet one of the defined classes of financial product (or financial advice product).[256]

193. In practice this means that where a particular digital asset (e.g. a coin or token) is not a financial product or financial advice product (and among other things):

(a) an offer of coins or tokens to investors or users is not an offer which requires a product disclosure statement (if investors are retail) or to be limited to wholesale investors[257] only;

(b) a cryptocurrency exchange which lists similar coins or tokens does not need a licence as the provider of a "financial products market" (the kind of licence NZX has);

(c) secondary sales of coins or tokens on a marketplace are not subject to insider trading or market manipulation rules;

(d) advice given in relation to buying or selling the coin or token is not regulated financial advice; and

(e) providing a custody service to hold the coin or token on behalf of others (for example, where coins are held in a wallet controlled by a cryptocurrency exchange) is not a regulated client money or property service.

194. The provision of some of these services may still be a "financial service" (for example, as a means of payment or a value transfer service) triggering AML/CFT obligations and requiring registration on the Financial Service Providers Register[258] (**FSPR**) (see from paragraphs 218 and 226 below). In this

[255] FMCA, section 564. For clarity, in New Zealand, it is "financial products" that are regulated not "securities" under the FMCA. This is different from other jurisdictions such as the United States where products can be subject to significant regulation if they are "securities" under US law.

[256] MinterEllisonRuddWatts published one of the first guides in New Zealand in 2017 to the application of these definitions to digital assets: https://www.minterellison.co.nz/our-view/tokens-of-our-affection-an-introduction-to-icos-and-digital-tokens. See also the guidance subsequently published by the FMA, discussed from paragraph 214 below.

[257] "Wholesale investors" are defined in Schedule 1 of the FMCA, and include financial institutions, large investors (with net assets of more than $5 million), government agencies, persons meeting investment activity criteria and persons who self-certify themselves to be experienced "eligible investors".

[258] https://fsp-register.companiesoffice.govt.nz/.

case, they will also be subject to the fair dealing requirements in Part 2 of the FMCA (not to be misleading, deceptive or make unsubstantiated representations).

195. We examine these requirements under the FMCA in more detail below.

Offers of financial products

196. Part 3 of the FMCA regulates offers of financial products for issue and, in certain circumstances, for sale. An offer of a financial product to a person in New Zealand who requires disclosure under Part 3 of the FMCA is a "regulated offer" (unless one of the exclusions in Schedule 1 of the FMCA apply).

197. A person who makes a regulated offer must comply with certain disclosure, licensing and/or governance obligations under the FMCA, with such obligations varying according to the type of financial product offered. This person must also comply with FMCA financial reporting obligations.

198. These rules are potentially relevant (if a financial product was involved), where a person wishes to offer digital coins or tokens for sale to persons in New Zealand, either to raise capital or simply to put them into circulation to create a token economy. This could be through what is known as an initial coin offering (ICO)[259] or under a simple agreement for future tokens (SAFT).[260] Under New Zealand law, therefore, offers of tokens which are not clearly financial products (as will often be the case[261]) will not be caught by Part 3 of the FMCA.

Money or property handling rules (including custody)

199. The FMCA also regulates provision of a "client money or property service". To see how this may (or may not) apply to digital assets it is necessary to step through some definitions.

Client money or property service
The receipt of client money or client property by a person and the holding, payment, or transfer of that client money or client property; and includes a custodial service.
Custodial service
A custodial service is defined as the holding of client money or client property by a person (A) in trust for, or on behalf of, a client (C), or another person nominated by C, under an agreement between A and C or between A and another person with whom C has an agreement (whether or not there are also other parties to the agreement). This could include an entity holding shares on behalf of managed funds, or even a service such as Sharesies where a central entity holds investment products on behalf of the users of the service.
Client money
Money received in connection with acquiring, holding, or disposing of a financial advice product or otherwise in connection with a financial advice product; and received from, or on account of, a client by a person (A) (and not on A's own account).

[259] Or variants offered via a centralised cryptocurrency exchange (IEO) or a decentralised exchange (IDO).

[260] The SAFT is based on the SAFE (simple agreement for future equity, developed by Y Combinator, an incubator startup companies, in the United States.

[261] Many tokens in this context are "utility tokens" which do not promise a financial return but may either be used to purchase items or services, or unlock features, within a digital ecosystem under construction. In some ways, this is a "Kickstarter" like form of pre-funding software development by pre-selling functionality. In practice, however, many tokens were offered and purchased as an investment on the assumption that they would be listed on an exchange and gain in value as the project reached completion or increased in popularity.

Client
The person on whose behalf the client money or client property is received, held, paid, or transferred under the service, but excludes the 'product provider'. The "product provider" of a financial product is the issuer of the product.

200. There is no licensing requirement to provide a client money or property service; however, the provider will need to register on the FSPR to provide client money or property services. If the provider is servicing retail clients,[262] it will also need to sign up to an approved dispute resolution scheme.

201. Client money and property service providers are subject to general conduct obligations, including to exercise care, diligence and skill and not receive client money or client property in relation to illegal offers.

202. Additional and significant obligations also apply if a client money or property service is provided to retail clients in relation to holding client money or property on trust (and separately from the provider's own money), keeping proper records, providing information to clients and obtaining an annual assurance requirement. There is also provision for specific disclosure (although nothing is yet prescribed).

203. Applying the above, if digital assets are not financial advice products, these regulations will not apply to a custody service.

Financial product markets

204. The FMCA requires the provider of a financial product market to hold a licence (such as that held by NZX), unless an exemption applies. This regime will apply to a digital asset marketplace (such as a cryptocurrency exchange) if it lists coins or tokens which are financial products.

205. To date, no digital asset exchange has applied for such a licence. Instead, exchanges will (or should) maintain a process to ensure that where a coin or token is considered for listing it is tested against the financial product definitions, and only listed if it is clearly not a financial product.

Financial advice

206. Again, to consider how the FMCA could apply to digital assets, it is necessary to step through key definitions (edited to show relevant parts only):

Financial advice includes
Making a recommendation or giving an opinion about acquiring or disposing of (or not acquiring or disposing of) a financial advice product. Designing an investment plan. Providing financial planning of a kind prescribed by regulations (none currently prescribed).
Financial advice does not include
Providing factual information only, recommending a kind of financial advice product, recommending a person obtain financial advice, passing on another's advice,

[262] Retail clients means everyone who is not a wholesale client (broadly the same categories as for a wholesale investor – see note 257 above.

207. Where financial advice falls within the regime, a "financial advice provider" licence is required to deal with retail clients.[263] Prescribed disclosure is required before advice is given, and in certain other contexts. The adviser must also comply with statutory duties as to due skill and care and in relation to conflicts, and the requirements of the Code of Professional Conduct for Financial Advice Services (**Code**). More limited duties apply (and a licence is not required) to give advice to wholesale clients only.

208. The Code itself also sets out high level standards including:

Part 1	**Part 2**
Treat clients fairly	Have general competence, knowledge and skill
Act with integrity	Have particular competence, knowledge and skill for designing an investment plan
Give financial advice that is suitable	Have particular competence, knowledge and skill for product advice
Ensure that the client understands the financial advice	
Protect client information	

209. Applying the above, if digital assets are not financial advice products, the financial advice rules will not apply.

Fair dealing

210. Any conduct in relation to dealing in financial products or the supply of financial services in New Zealand, will be subject to the "fair dealing" requirements in Part 2 of the FMCA. These requirements are similar to the requirements of the Fair Trading Act 1986; however, they are enforced by the FMA as they are part of the FMCA. Similar rules may apply under the Fair Trading Act (and other rules such as those in relation to unfair contract terms) and will be enforced by the Commerce Commission. In areas where both regulators may take an interest there is a memorandum of understanding between them as to how they will proceed (and each statute contains provisions limiting the availability of multiple penalties for the same conduct).

211. As noted above, those who provide certain services in relation to digital assets may be providing a financial service (such as issuing a means of payment or providing a value transfer service) even where the coins or tokens in question are not financial products.

212. The fair dealing provisions in the FMCA prohibit a person from engaging in conduct that is misleading or deceptive, making false, misleading or unsubstantiated representations or selling financial products via unsolicited meetings.

The FMA's approach to regulation under the FMCA

213. The FMA stated in its submission to the Committee that it regulates cryptocurrency issuers or service providers, such as exchanges, to the extent they are issuing cryptocurrencies that are financial products, or if they are in the business of providing a financial service.[264]

[263] See note 262 above.

[264] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2009/1d0aaf2e5df1bffb6f4ead2e4c1c3d61d758b1df.

214. The FMA's website also provides useful guidance as to its views on the treatment of digital assets.[265] For example:

(a) exchanges that allow trading of cryptoassets that are financial products under the FMCA may need a licence;

(b) wallet providers who hold money for "depositors" may be offering regulated debt securities;

(c) brokers who deal with cryptoassets that are financial products under the FMCA may fall within client money or property service rules;

(d) crypto investments may be derivatives or (where there is a pooled vehicle) managed investment products;

(e) initial coin offers (ICOs) may be offers of financial products (e.g. "security tokens"), and if not may still be subject to fair dealing requirements;[266]

(f) dealings with cryptoassets (including ICOs) may also be financial services requiring FSPR registration, thus triggering AML/CFT Act requirements;

(g) asset-backed tokens (including stablecoins) may be financial products (to be determined on a case-by-case basis);

(h) utility tokens[267] are not considered managed investment products simply because they can be traded on a cryptoasset exchange or other secondary market; and

(i) the FMA can designate cryptoassets to be a particular financial product if, based on their economic substance, this is necessary to promote fair and efficient financial markets in New Zealand or any of the other purposes of the FMCA.

215. In practice, the FMA has a wide range of powers (even under the fair dealing rules alone) to deal with problematic behaviour in relation to digital assets. The FMA can, for example, make orders requiring an ICO issuer in New Zealand to comply with the law, including amending or taking down non-compliant promotional material. A breach of the fair dealing requirements is also a civil liability offence with a potential pecuniary penalty. ICO issuers can also be ordered to pay compensation to people who have suffered a loss as a consequence of a breach of the fair dealing requirements.

216. The FMA is often asked in the wider Fintech context whether New Zealand should have a regulatory sandbox for innovative (generally technology-based) businesses. FMA's response is generally that a sandbox is not required, because the FMA has sufficient flexibility under current regulatory settings and approach to accommodate new and innovative products and services. In relation to licensing, the FMA's website notes the FMA can modify the requirements of the FMCA for licence holders to ensure the application and assessment process is "right-sized" for the idea and business size.[268] Where appropriate, the FMA is also open to granting exemptions which reduce or modify disclosure and licensing obligations.[269]

217. The FMA in its submission also stated:[270]

> *We maintain an open-door policy and engage with people and sectors involved in innovation to help us to understand emerging trends in product and service development. We also*

---

[265] https://www.fma.govt.nz/compliance/role/cryptocurrencies/.

[266] https://www.fma.govt.nz/compliance/role/cryptocurrencies/fair-dealing-and-initial-coin-offers/.

[267] Defined as *"tokens (sometimes called "application tokens") [that] typically give investors the right to access and/or use a company's platform, product or service… [that] often grant holders rights similar to pre-payment vouchers"*.

[268] https://www.fma.govt.nz/about-us/innovation/.

[269] https://www.fma.govt.nz/about-us/innovation/.

[270] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2009/1d0aaf2e5df1bffb6f4ead2e4c1c3d61d758b1df.

engage with the International Organization of Securities Commissions (IOSCO), the international body for securities markets regulation, which has set up a FinTech network to facilitate information sharing, knowledge and regulatory experience.

The FMA is also the lead agency for the FinTech forum (www.fintech.govt.nz) of the Council of Financial Regulators (www.cofr.govt.nz). This forum meets regularly to identify emerging trends in technology enabled financial services, discuss appropriateness of regulatory frameworks as well as to provide a multiagency regulatory guidance service for the fintech community.

Anti-Money Laundering and Countering Financing of Terrorism Act 2009

218. The AML/CFT Act establishes a regime for the detection and deterrence of money laundering and terrorism financing in New Zealand. It imposes significant obligations on reporting entities (see below) to have in place procedures and processes designed to detect and deter, and manage and mitigate the risk of, money laundering and the financing of terrorism. There are civil and criminal penalties for non-compliance with these obligations.

219. Under the AML/CFT Act, AML/CFT obligations primarily apply to "reporting entities", which include "financial institutions". Financial institutions are entities which, in the ordinary course of business, carry on certain specified activities. The nature of the activities carried on will determine which of the three AML/CFT supervisors (FMA, RBNZ or DIA) will supervise an entity.

220. A reporting entity has initial and ongoing compliance obligations under the AML/CFT Act, including requirements to:

(a) appoint a compliance officer;[271]

(b) have a written risk assessment[272] and programme;[273]

(c) conduct initial and ongoing customer due diligence (CDD) on its customers;[274]

(d) report certain matters to police;[275]

(e) keep records;[276]

(f) be independently audited (generally every three years);[277] and

(g) report annually to their AML/CFT supervisor. [278]

221. The AML/CFT Act does not explicitly refer to digital assets. However guidance from both the international Financial Action Task Force (**FATF**) and the New Zealand AML/CFT supervisors is clear that the rules should apply to certain VASPs. For example, the DIA, in its March 2020

[271] AML/CFT Act, section 56.

[272] AML/CFT Act, section 58. See also the Risk Assessment Guideline here: https://www.dia.govt.nz/Pubforms.nsf/URL/AMLCFT-Risk-Assessment-Guideline-2018.pdf/$file/AMLCFT-Risk-Assessment-Guideline-2018.pdf.

[273] AML/CFT Act, sections 56 and 57. See also the AML/CFT programme guideline here: https://www.dia.govt.nz/Pubforms.nsf/URL/AMLCFT-Programme-Guideline-2018.pdf/$file/AMLCFT-Programme-Guideline-2018.pdf.

[274] AML/CFT Act, section 10, 11, and 31.

[275] AML/CFT Act, sections 40 and 48A. See also the Suspicious Activity Reporting Guideline here: https://www.police.govt.nz/sites/default/files/publications/suspicious-activity-reporting-guideline.pdf.

[276] AML/CFT Act, sections 49 – 51.

[277] AML/CFT Act, section 59; Anti-Money Laundering and Countering Financing of Terrorism (Requirements and Compliance) Regulations 2011, regulation 13. See also the Guideline for audits of risk assessments and AML/CFT programmes here: https://www.fma.govt.nz/compliance/guidance-library/amlcft-audit-guideline/.

[278] AML/CFT Act, section 60.

guidance 'Virtual Asset Service Providers – Complying with the AML/CFT Act' states that, in their view, VASPs are considered "financial institutions".

222. In its guidance, the DIA defines virtual assets as *"digital representations of value, which can be digitally traded, or transferred, and can be used for payment or investment purposes"*.[279] The DIA's definition aligns closely with that provided FATF in October 2021 in its Updated Guidance for a risk-based approach for Virtual Assets and Virtual Asset Service Providers.[280]

223. The DIA recommends that all VASPs notify it before commencing their services. Where a VASP potentially falls under the supervision of two different supervisors (e.g. the DIA and the FMA), the supervisors will decide between them who will supervise the VASP.

See our further discussion of each supervisor's approach under the heading "Approach of the AML/CFT Supervisors" below.

224. MinterEllisonRuddWatts has summarised some of the key issues with implementing AML/CFT rules in the digital asset space in New Zealand in the context of the Updated Guidance:[281]

> *Many participants in the [virtual asset] space in New Zealand find the current ambiguity frustrating, with supervisor guidance indicating coverage beyond that provided for on the face of the AML/CFT Act. As a result, there can be an uneven playing field, with those who take a high-compliance approach facing competition from those applying the law strictly as written.*
>
> *Further, the ambiguity means market participants are reliant on individual supervisor guidance or legal advice in order to know how to comply, and that guidance can vary depending on when it is given and can be understood differently by different participants.*
>
> *….*
>
> *Further, the [updated 2019 Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers] explicitly recommends that jurisdictions should, in regulating [virtual asset service providers], be aware of the impacts that may have on other areas, such as financial inclusion and financial innovation. This will be crucial to keep AML/CFT obligations proportionate to actual risks.*
>
> *This is also an important reminder that we need to balance our understandable desire to "becom[e] the hardest place in the world for money laundering, terrorism financing, and financing the proliferation of weapons of mass destruction" (as stated in the Terms of Reference for the [Ministry of Justice's Statutory Review of the AML/CFT Act]) against the risk of unintended consequences, such as driving legitimate innovation offshore or excluding law-abiding citizens from the financial system.*
>
> *…*
>
> *… any New Zealand regulation of [virtual assets] should be designed with how other jurisdictions do so in mind. If not, it risks pushing talent and innovation overseas, without materially reducing ML/TF risk. This is reinforced by the FATF in the [updated 2019 Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers], encouraging countries to strive for "even and efficient implementation globally in order to avoid jurisdictional and supervisory arbitrage".*

---

[279] Department of Internal Affairs, "Virtual Asset Service Providers: Complying with the Anti-Money Laundering and Countering Financing of Terrorism Act 2009" (March 2020).

[280] http://www.fatf-gafi.org/media/fatf/documents/recommendations/Updated-Guidance-VA-VASP.pdf.

[281] https://www.minterellison.co.nz/our-view/fatf-releases-updated-virtual-asset-and-virtual-asset-service-provider-guidance. For disclosure of interest, one of the Advisers, Jeremy Muir, is an author of this article.

225. As at August 2023, the Ministry of Justice has completed its review of the AML/CFT Act. The Ministry, in its initial consultation paper, asked whether all types of VASPs should have AML/CFT obligations. In particular, it asked whether to expand the scope of "financial institution" to include "safekeeping and/or administration of virtual assets or instruments enabling control over virtual assets".[282] Regulations have been issued, with more work to come, to address some of these issues.

Financial Service Providers (Registration and Dispute Resolution) Act 2008

226. The Financial Service Providers (Registration and Dispute Resolution) Act 2008 (**FSP Act**) requires all persons providing a financial service from a place of business in New Zealand to register on the Financial Service Providers Register (**FSPR**) [283] and meet ongoing requirements.[284] Financial service providers who provide financial services to retail clients must also be members of an approved dispute resolution scheme.

227. The definition of "financial service"[285] is broadly similar to the list of activities which define a "financial institution" in the AML/CFT Act.

228. The FSP Act applies to every person who is in the business of providing a financial service if (most relevantly):[286]

    (a) the person's financial services are provided to persons in New Zealand; or

    (b) the person is a reporting entity to which the AML/CFT Act applies.

229. In practice, therefore, VASPs which are set up or operate in New Zealand must consider whether to register on the FSPR and comply with the AML/CFT Act in tandem.

Approach of the AML/CFT supervisors

230. The primary AML/CFT supervisor for VASPs is the Department of Internal Affairs (**DIA**), as the supervisor with responsibility for the captured activities of:

    (a) issuing or managing the means of payment; and

    (b) transferring money or value for, or on behalf of, a customer.

231. The FMA would be the relevant supervisor for entities seeking to offer derivatives or managed investment products in relation to digital assets. The RBNZ supervises banks (which would include their activities in relation to digital assets).

232. The DIA states in its March 2020 guidance 'Virtual Asset Service Providers – Complying with the AML/CFT Act' that, in its view, VASPs are "financial institutions". [287]

233. In the Advisers' view, this is likely an overstatement (or at least a question of definition). The world of digital assets is becoming increasingly diverse so that not all services in relation to them should fall into the net of the AML/CFT Act.

---

[282] See page 27 of the Consultation Document for the statutory review of the AML/CFT Act: https://www.justice.govt.nz/assets/Documents/Publications/AMLCFT-Statutory-Review-Consultation-Document.pdf.

[283] FSP Act, section 11.

[284] These include annual confirmations (section 16 and 17) and payment of fees and levies (see http://www.legislation.govt.nz/regulation/public/2012/0121/latest/DLM4491364.html).

[285] FSP Act, section 5.

[286] FSP Act, section 7A.

[287] https://www.dia.govt.nz/diawebsite.nsf/Files/AML-CFT-2020/$file/AML-CFT-VASP-Guideline.pdf.

234. In its guidance, the DIA identifies five types of VASPs and how it considers they may be caught and the supervisor responsible:[288]

Type of VASP	Typical activity and likely supervisor
Virtual asset exchanges	If you are issuing your own cryptocurrency, you will be "**issuing or managing the means of payment**" (DIA) If you are facilitating trading, you will be "**transferring money or value for, or on behalf of, a customer**" (DIA) If your activity involves a virtual asset that is a 'financial product' under the Financial Markets Conduct Act 2013 (FMC Act), you will likely be supervised by the FMA. For example, if your virtual asset exchange is facilitating the trading of virtual assets that are financial products.
Virtual Asset Wallets	If the wallet facilitates exchanges it will be "**transferring money or value for, or on behalf of, a customer**" (DIA) If the wallet stores, but does not allow exchange of virtual assets, it will **not** be a reporting entity under AML/CFT Act.
Virtual Asset Broking	If you are arranging transactions, you will be "**transferring money or value for, or on behalf of, a customer**" (DIA)
Initial coin offering (ICO) provider	Depending on the rights attaching to the VA and terms of offer, the provider may be "**issuing or managing the means of payment**" (DIA); and/or "**transferring money or value for, or on behalf of, a customer**" (DIA) If your ICO involves a virtual asset that is a 'financial product' under the Financial Markets Conduct Act 2013 (FMC Act), you will likely be supervised by the FMA. For example, if your ICO offers virtual assets that are financial products.
Providing investment opportunities in virtual assets	If you are providing investment opportunities in virtual assets (e.g. via a derivatives issuer providing virtual asset options), AML/CFT obligations will apply in the same way as if you were providing investment opportunities in traditional assets or financial products. FMA will likely be your supervisor. For more information, see https://www.fma.govt.nz/business/focus-areas/amlcft/

235. The DIA has assessed the overall inherent risk of VASPs as high.[289] The DIA notes that:

> *Whilst individual VASPs will have their own level of residual risk determined by the [money laundering and terrorism financing (ML/TF)] risk factors that apply to their specific services and activities and the controls they will put in place to mitigate these risks, both domestic and international evidence and guidance points to risks presented by the VASP sector. The easy access and wide geographic spread of VASP services, coupled with their pseudo-anonymous nature and use in every phase of ML/TF and in many different ML/TF typologies, means this sector presents a high inherent risk of ML/TF.*

236. As part of the DIA's sector risk assessment, six key vulnerabilities and high-risk factors associated with VASPs were identified, including:

(a) new payment technology;

[288] Table is DIA's own taken from the guidance. See note above. Note that we have updated the link to FMA's page on AML/CFT.

[289] https://www.dia.govt.nz/diawebsite.nsf/Files/AML-CFT-December-2019/$file/Financial-Institutions-SRA-2019.pdf. See also https://www.dia.govt.nz/diawebsite.nsf/Files/AML-CFT-2020/$file/AML-CFT-VASP-Guideline.pdf at pp 6-8 .

(b) anonymity and complexity;

(c) lack of money laundering/terrorism financing awareness;

(d) international payments;

(e) high risk customers/jurisdictions; and

(f) politically-exposed persons (PEPs) and high wealth individuals.

237. The DIA expects that these are considered as part of a business's risk assessment as important overarching themes relevant to the VASP sector. The DIA notes that a business's specific context is essential in identifying and determining the degree of ML/TF vulnerability and risk in that business.

238. The FMA's sector risk assessment for 2021[290] was its first to include VASPs, noting that it *"expect[s] all [reporting entities] to familiarise themselves with the risks and vulnerabilities associated with VASPs and virtual assets, and incorporate this into your risk assessments where appropriate. At a minimum, [reporting entities] should closely read the DIA's sector risk assessment and guidance on VASPs"*.[291]

239. The FMA sets out further guidance on where it considers digital assets may be captured for AML/CFT Act purposes (and under the FSPA) on its website, summarised below: [292]

Activity	**Financial Services Category**
Exchanges issuing their own cryptoassets	Issuing and managing means of payment
Exchanges allowing cryptoasset trading	Operating a value transfer service
Wallet provider storing cryptoassets or money on behalf of others, and you facilitate exchanges between cryptoassets or between money and cryptoassets	Operating a value transfer service
Arranging cryptoasset transactions	Operating a value transfer service
Safe-keeping or administration services in relation to cryptoassets	Keeping, investing, administering, or managing money, securities, or investment portfolios on behalf of other persons
Providing investment opportunities in cryptoassets	Regulated in the same way as if you were providing investment opportunities in traditional assets or financial products
Initial coin offerings (**ICOs**)	Operating a value transfer service (e.g., offers of asset backed tokens and utility token) and/or issuing and managing a means of payment (e.g., where tokens can be used to obtain products or services otherwise acquired using legal tender (such as NZ dollars))

[290] https://www.fma.govt.nz/assets/Reports/AML-Sector-Risk-Assessment-2021.pdf.

[291] https://www.fma.govt.nz/assets/Reports/AML-Sector-Risk-Assessment-2021.pdf at page 13.

[292] https://www.fma.govt.nz/compliance/role/cryptocurrencies/.

The Commerce Commission's approach

240. Other agencies not normally engaged in the digital asset space but have recently been involved include the Commerce Commission, which looks after consumer regulation.

241. The Commerce Commission released a document outlining 10 pyramid schemes between August 2001 and August 2021. The document (released under the Official Information Act) states there have been four known cases of cryptocurrency-based pyramid or multi-level marketing schemes in New Zealand:[293]

(a) **OneCoin:** promoted and sold education packages related to the mining and trading of OneCoin cryptocurrency (which does not exist). The Commerce Commission took no further action.

(b) **'Bitcoin Aotearoa':** social fundraising platform which "*alleged that participants could earn bitcoin donations and promotion to a higher level in scheme by recruiting additional participants to donate bitcoin.*" The Commerce Commission issued a compliance letter to the platform.

(c) **Lion's Share:** run by Shelly Cullen, who promised recruits cryptocurrency rewards if they recruited new people to the scheme. In January 2021, the Commerce Commission issued a Stop Now letter which warned Cullen to halt all activities related to the scheme or face being prosecuted in the High Court.[294]

(d) **Mobilio/Justbeenpaid:** This "*[p]rogramme alleged to offer high rates of interest on investments; alleged that investors were placed at level in programme based on amount invested and could change that level on the introduction of additional investors.*" The Commerce Commission issued a compliance advice letter.

242. There should clearly be (and we assume there is) a sharing of knowledge between the FMA and Commerce on their engagements with that digital asset services – particularly in relation to fair dealing issues.

Tax Legislation

Introduction

243. This section covers:

(a) New Zealand's approach to taxing cryptoassets;[295]

(b) the current challenges with applying New Zealand's tax rules to cryptoassets;

(c) the potential consequences if New Zealand does not address these challenges; and

New Zealand's approach to taxing cryptoassets

244. Prior to 2022, New Zealand did not have any specific tax rules for cryptoassets. Cryptoasset investors and their advisors were required to apply tax rules originally designed for other asset classes. There was only limited commentary from the IRD on how the rules should be applied to cryptoassets. At its most basic level, this means that gains on cryptoassets are subject to income tax if the cryptoasset:

---

[293] https://comcom.govt.nz/__data/assets/pdf_file/0027/264933/OIA-21.018-Response4180535.1_Redacted.pdf. See also https://securitybrief.co.nz/story/the-wild-west-of-cryptocurrency-fraud-how-kiwis-are-getting-stung.

[294] https://comcom.govt.nz/___data/assets/pdf_file/0020/232373/Stop-Now-letter-Shelly-Cullen-21-December-2020.pdf.

[295] The term "cryptoasset" is used in this section in preference to "digital asset" to match IRD's general usage.

(a) was acquired for the purpose of disposal;

(b) is sold in the course of a business of dealing in cryptoassets (or similar assets); and / or

(c) is sold as part of a profit-making undertaking or scheme.

245. Applying New Zealand's standard tax rules to cryptoassets has led to confusion, and a perception that New Zealand is "behind the curve" in this area. GST on bitcoin is a case in point. Despite being established in 2009 and rapidly becoming the world's largest cryptocurrency, until recently the GST treatment of bitcoin sales was not clear.

246. The Commentary to the *Taxation (Annual Rates for 2021–22, GST, and Remedial Matters) Bill* acknowledged that GST on Bitcoin transactions would create a host of issues. Including (amongst other things) that:

> ***Tax settings disincentivising purchasing of cryptoassets by residents***: Applying GST to cryptoassets could result in supplies to non-residents being zero-rated for GST purposes but subject to GST when supplied to residents. This creases a distortion and preference to sell to offshore investors.
>
> ***Double taxation***: This could occur when an asset is purchased with bitcoin and then that bitcoin is converted back into fiat currency.

As a practical matter we suspect few, if any, New Zealand taxpayers accounted for GST on their bitcoin transactions.

247. To the IRD's credit, the IRD recognised the difficulty in applying New Zealand's standard tax rules to cryptoassets, and has worked to:

(a) provide further commentary on the taxation of cryptoassets under New Zealand's standard tax rules; and

(b) consult on potential changes to the New Zealand's tax rules to better accommodate cryptoassets.

248. These efforts have culminated in recent amendments to New Zealand's income tax and GST rules under the *Taxation (Annual Rates for 2021–22, GST, and Remedial Matters) Act 2022* to make clear that:

(a) "cryptocurrencies" are not subject to GST; and

(b) "cryptocurrencies" are generally "excepted financial arrangements", unless they are economically equivalent to debt arrangements. This is important, because if a cryptoasset is a financial arrangement, the holder of the cryptoasset can be subject to tax on unrealised gains.

249. These amendments have been broadly welcomed, but do not address all of the tax issues in this sector. There are already new developments in the cryptoasset sector that are creating new tax compliance challenges for taxpayers.

The current challenges with applying New Zealand's tax rules to cryptoassets

250. The fundamental issue with taxing cryptoassets is that:

(a) there are thousands of different types of cryptoassets;

(b) each type of cryptoasset has its own features; and

(c) the use cases for cryptoassets are constantly evolving.

251. For example, while the recently enacted amendments described above are clearly welcome, they do not address more recent innovations in the cryptoasset sector such as:

(a) non-fungible tokens (NFTs);

(b) staking and decentralised finance (DeFi) arrangements; and

(c) decentralised autonomous organisations (DAOs).

252. Once again, taxpayers are left to apply existing tax rules designed for other asset classes to these evolving areas, creating confusion and uncertainty for many taxpayers. Take a basic example of a taxpayer who buys NFTs on OpenSea (the world's first and largest web3 marketplace) who may:

(a) have converted bitcoin into ether (another cryptocurrency), so that they can transact on OpenSea.

(b) Sell the NFT for ether after several months of ownership, at which point in time some of the sale proceeds may be directed to the original creator under a "smart contract" as a "royalty payment".

(c) convert the ether to NZD.

253. On the face of it each of these steps is a taxable disposal for income tax purposes, and the sale of the NFT may be subject to GST. The taxation of the sale proceeds diverted to the original creator is not clear – perhaps this is a royalty subject to withholding tax. It goes without saying that this is a tax compliance "nightmare", in what is a relatively common scenario.

254. We understand the IRD is again looking at how to address these new challenges (particularly in respect of De-Fi). But we suspect that the New Zealand's tax legislation will never be updated fast enough to keep up with the challenges in the cryptoasset sector.

The Financial Market Infrastructures Act 2021

255. The recently enacted Financial Market Infrastructure Act 2021 (**FMI Act**) creates a new regime to regulate and supervise financial market infrastructures (**FMIs**).

What is an FMI?
Any multilateral system for the clearing, settling, or recording of any of the following: (a) payments; (b) personal property, or transactions involving personal property, within the financial system; and (c) other transactions within the financial system.

256. An FMI includes (without limitation) payment systems, central securities depositories, settlement systems, central counterparties and trade repositories.

257. Under the new regime, the RBNZ will be the sole regulator of "pure payment system" FMIs (being multilateral systems solely for the clearing or settlement of payment obligations). All other FMIs will be jointly regulated by the RBNZ and the FMA. The FMI Act provides for different treatment of designated and non-designated FMIs, with designated FMIs being those identified as systemically important. For non-designated FMIs, the joint regulators' powers are limited to information gathering primarily to identify whether an FMI has become systemically important.

258. Certain tokenised arrangements, such as stablecoins, could fall into the ambit of the Act but are unlikely, at least initially, to be designated as systemically important.

Approach of the RBNZ

259. The RBNZ has not released any formal guidance in relation to digital assets.

260. However, the RBNZ's submission to the Committee provides some insights, including that:

(a) the RBNZ prefers to refer to digital assets as crypto-assets and not crypto-currencies so as to not suggest crypto-currencies are legal tender in New Zealand; and

(b) the RBNZ acknowledges that existing regulatory regimes were developed with the traditional monetary system in mind, which is why it is undertaking a regulatory gap analysis to identify whether additional regulatory and/or non-regulatory measures are necessary to address risks posed by innovation in money.[296]

Stablecoins

261. The RBNZ considers that arrangements in relation to stablecoins are captured under existing regimes like the FMCA, noting that this is on the assumption that such arrangements *"pose the same or similar risks that the regimes are intended to address"*.[297]

262. As noted above, where stablecoin arrangements function as payment systems, the RBNZ and FMA have powers under the FMI Act to designate the stablecoin as systemically important.[298]

263. There are plans for the RBNZ and FMA to adapt international best practice, in the form of the "Principles for Financial Market Infrastructures" (**Principles**), which are viewed by the Principles' authors (and whose view the RBNZ supports) as suitable to address financial stability risks arising from stablecoins that are part of systemically important payment systems.[299] However, the Principles' authors recognise clarification is needed as to how the Principles interact with other international standards and that other regulatory treatments may be relevant for stablecoin functions, like client asset protection and integrity concerns. Similarly, the RBNZ "*is mindful of the need for consistency across [its] other current work programmes, for example, in the treatment of stablecoins that carry out substantively similar functions to deposit institutions*."[300]

Digital assets other than stablecoins

264. The RBNZ considers that digital assets without stabilising mechanisms linked to conventional currencies or assets are not likely to be used for payment, savings or settlement. As such those digital assets do not raise system-wide risks (financial stability risks, undermining monetary sovereignty, reputational risks for other money, market integrity, regulatory arbitrage) that are monitored by the RBNZ. Instead, these digital assets present risks for investors which are addressed through the FMCA and the FMA.

265. Where the RBNZ considers the risk of institutional exposure to digital assets is material or a wealth impact is generated from digital assets among retail investors, then it will consider the proposed prudential regulatory approach by the Basel Committee on Banking and Supervision.[301]

---

[296] The RBNZ noted in paragraph 6.7 of its submission that the analysis is expected to be completed by late 2021.

[297] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2044/e638a91cd4342b9777637d4f81bcd9ef99d4a47d at [6.1].

[298] FMI Act, section 21.

[299] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2044/e638a91cd4342b9777637d4f81bcd9ef99d4a47d at [6.5]. See also FSB 'Regulation, Supervision and Oversight of "Global Stablecoin" Arrangements', 13 October 2020, Annex 4.

[300] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2044/e638a91cd4342b9777637d4f81bcd9ef99d4a47d at [6.8].

[301] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2044/e638a91cd4342b9777637d4f81bcd9ef99d4a47d at [5.27]. See also the Basel Committee on Banking Supervision 'Prudential treatment of cryptoasset exposures' Consultation Document, 10 June 2021.

266. In relation to AML/CFT risks, the RBNZ has a stewardship interest in the implications on market integrity of digital assets.[302] The RBNZ also notes that reporting entities under its supervisory ambit are not providing facilities to those engaging in digital assets because of AML/CFT risks.

Central bank digital currency

267. The RBNZ completed a consultation on the Future of Money / Te moni anamata.[303] The first two papers (published in September 2021) explored the stewardship;[304] role of the RNNZ in relation to money and cash[305] and a proposed approach to developing a Central Bank Digital Currency (**CBDC**).[306] The third paper, published in November 2021, sets out issues and high-level options available for redesigning the cash system to extend its future to meet need and demand.[307]

268. The RBNZ published a summary of responses in response to the submissions it received on the consultation documents.[308] In its summary the RBNZ observed that:[309]

(a) A CBDC is needed to preserve the public role of central bank money and that concerns around the potential loss of privacy and anonymity will be carefully considered in future CBDC design options; and

(b) Cash still has an important place in people's lives economically, socially, culturally, and will be kept to ensure financial inclusion (noting that some people may have limited access to technology and rely on physical cash as a means of payment).

269. The RBNZ has begun design work on a retail CBDC.[310]

---

302 https://www.rbnz.govt.nz/hub/publications/speech/2022/speech2022-02-08

303 https://www.rbnz.govt.nz/money-and-cash/future-of-money.

304 https://www.rbnz.govt.nz/-/media/project/sites/rbnz/files/consultations/banks/future-of-money/stewardship-issues-paper.pdf.

305 https://www.rbnz.govt.nz/-/media/project/sites/rbnz/files/consultations/banks/future-of-money/stewardship-issues-paper.pdf.

306 https://www.rbnz.govt.nz/-/media/project/sites/rbnz/files/consultations/banks/future-of-money/cbdc-issues-paper.pdf.

307 https://www.rbnz.govt.nz/-/media/project/sites/rbnz/files/consultations/banks/future-of-money/cash-system-redesign-issues-paper.pdf.

308 https://www.rbnz.govt.nz/-/media/project/sites/rbnz/files/consultations/future-of-money/future-of-money-summary-of-responses.pdf.

309 https://www.rbnz.govt.nz/-/media/project/sites/rbnz/files/consultations/future-of-money/future-of-money-summary-of-responses.pdf.

310 https://www.rbnz.govt.nz/hub/news/2022/02/innovation-key-to-the-future-of-money-and-cash.

Part 3: Options and recommendations

Regulation

Should policy settings be neutral, encourage developments, or attempt to restrict developments in digital assets and blockchain in New Zealand?

Remain hands-off

270. A hands-off policy setting is a political way of balancing everyone's interests while allowing the government to understand the technology and fully consider the risks and opportunities in relation to it.

271. However, many submissions to the Committee indicated that such an approach could lead to an exodus of business and skills in the technology sector to other jurisdictions that are prioritising the development of technology around digital assets and blockchain. That is, regulatory arbitrage will occur. The loss of such businesses and skills and the inability to attract businesses and skills from overseas would cause significant harm to New Zealand as the technology sector is New Zealand's second largest exporter.[311] As one submission said:[312]

> *All proposed new legislation or regulation must be considered in the context of approaches taken in other jurisdictions. Parliament must be conscious that some players can relocate or 'shop around' for more accessible forums to base themselves in a global market.*

272. Also, based on submissions from regulators (FMA, RBNZ) and existing consultations issued by government departments, the policy approach of remaining hands off does not appear to be the policy setting being adopted in respect of digital assets and blockchain.

Restriction

273. A restrictive approach would see the Government and regulators actively attempt to prevent the use of digital assets in New Zealand. While some countries have imposed limits and even bans on the use of crypto assets,[313] the majority of countries have not. Indeed, as we have seen in this report, countries that New Zealand often compares itself to, including Australia and the United Kingdom, are actively working on encouraging developments in digital assets and blockchain in those countries.

Encourage developments in digital assets and blockchain

274. It is clear that New Zealand government departments and regulators do, in fact, recognise the potential opportunities and benefits that the development of digital assets and blockchain can bring about. For example:

(a) MBIE released a consultation on "The future of business for Aotearoa New Zealand: An exploration of two trends influencing productivity and wellbeing – purpose-led business and use of blockchain technology". One of the trends it acknowledges is the use of blockchain technology, noting that:

> "… *over the next 10 years use of blockchain is likely to grow and broaden, reflecting its function as digital infrastructure. it is likely to become a more embedded capability in business and systems supporting productivity, and will enable more decentralised and networked business models (eg DAO). There is likely to be more uses that address social and environmental challenges and contribute to wellbeing*

---

311 https://www.mbie.govt.nz/dmsdocument/20250-the-future-of-business-for-aotearoa-new-zealand at page 32.

312 https://www.bitprime.co.nz/blog/new-zealand-parliament-submission-cryptocurrencies/.

313 https://tile.loc.gov/storage-services/service/ll/llglrd/2021687419/2021687419.pdf.

and use of this distributed data technology by Māori to grow business and enable Māori-led initiatives with data.";[314]

(b) The RBNZ's consultation on "Future of money – central bank digital currency", although accepting that challenges will come about with CBDCs, recognises the opportunities that CBDCs will have, providing that it believes; "*a CBDC would be a useful development for central bank money, because it would both support the value anchor role of central bank money, and support the ability of central bank money to act as a fair and equal way to pay and save.*";[315] and

(c) The FMA acknowledges its role in facilitating innovation in financial markets and raising the confidence and trust of investors in the digital financial market.

275. We also encourage New Zealand to consider this approach following United States President Joe Biden's Executive Order on Ensuring Responsible Development of Digital Assets.[316] The Executive Order, released in March 2022, outlines the United States' first ever, whole-of-government strategy to prioritise the research and development of policies to address risks, and harness the potential benefits, of digital assets and their underlying technology. This is particularly important given questions raised by digital assets' cross-border aspects and implications. Through the Executive Order, the United States has signalled it intends to reach out and work with international partners to promote robust standards and a level playing field—New Zealand should aim to be one of these international partners.

276. As a key and influential jurisdiction, the Executive Order is significant. The United States Executive has formally acknowledged the rapid growth of and potential benefits of adopting digital assets into the mainstream financial system. Participants in the crypto industry can expect to see more engagement, action from regulators on gaps in the law, and clarity in the coming months and years, and can move to take full advantage of the opportunities.

277. The United Kingdom has taken a similar attitude. The Treasury Committee in June 2022, making recommendations to the House of Commons in relation to a consultation on the "Future of Financial Services", stating:[317]

There is a range of innovations taking place in payments systems and with alternative means of exchange, including crypto-assets, stablecoins, and central bank digital currencies. These innovations could provide opportunities to address weaknesses in international payments systems and potentially to serve consumer needs, and in the case of central bank digital currency to safeguard monetary sovereignty. There are challenges associated with innovations in payments, including consumer protection, preventing crime and financial stability. [The Treasury Committee] will be conducting further work on how these challenges are managed.

We recommend:

Recommendation #1
We recommend that the Government adopt policy settings to encourage developments in digital assets and blockchain in New Zealand.

[314] Page 32 of https://www.mbie.govt.nz/dmsdocument/20250-the-future-of-business-for-aotearoa-new-zealand.

[315] https://www.rbnz.govt.nz/have-your-say/closed-consultations/future-of-money---central-bank-digital-currency.

[316] https://www.whitehouse.gov/briefing-room/presidential-actions/2022/03/09/executive-order-on-ensuring-responsible-development-of-digital-assets/.

[317] https://committees.parliament.uk/publications/22656/documents/166548/default/ at page 175.

Does New Zealand need to urgently design and implement an integrated regulatory framework for digital assets?

278. Creating and implementing an integrated framework would be a complicated endeavour. In an area that is constantly changing, it would also require frequent and timely updates as developments occur. Based on our understanding, agencies are not resourced or equipped to manage this. Some submissions to the committee also stressed the danger of trying to regulate quickly and then stifling innovation and bringing about unintended consequences as a result.

279. Adopting a policy of technology neutrality (as we have recommended above) recognises that there are many risks and market constructs that are not new and apply to existing assets and markets. Accordingly, at this point in time, we do not consider an entirely new framework in relation to digital asset and digital asset services is required.

280. For example, given the compliance costs likely associated with *licensing* digital asset service providers[318] and the fact that New Zealand's digital asset industry is still small compared with the broader financial services industry, it does not make sense in the short term to invest resources in designing a bespoke licensing regime for digital asset service providers. However, New Zealand is in a good position to monitor developments in Australia on the *Crypto asset secondary service providers: Licensing and custody requirements consultation*[319] and in the United States in respect of the Lummis-Gillibrand Responsible Financial Innovation Act progression.[320]

281. Guidance and clarification are, however, increasingly valuable to market participants. The OECD describes the benefits of adopting a regulatory framework based around clear and shared understanding of how existing rules operate:[321]

> *Industry participants, investors and financial consumers have argued that greater clarity around the regulatory and supervisory frameworks applied to tokenised assets and markets would assist the development of fair and sound markets for such instruments, even in the case of technology-neutral approach to policymaking, where the same rules will apply to the same types of risk. Market participants may not fully and correctly understand whether and how tokenised assets fall within the regulatory perimeter, or have intentionally attempted to avoid compliance with existing laws, thereby exposing themselves to risks, potentially engaging in illegal activities, and undermining the smooth functioning of such marketplaces.*
>
> *As with all financial instruments, guidance and clarifications on the regulatory perimeter and applicable regulations can help protect financial consumers and other market participants, while promoting market integrity. This was particularly the case at the early stages of development of tokenisation activity through ICOs, when guidance, positions, warnings and clarifications were issued by a vast number of jurisdictions (see Annex B of (OECD, 2019[2]), in many cases reminding participants that their activities were (or could potentially be) subject to the pre-existing regulatory regime.*

We recommend:

Recommendation #2
Because it is early in the development of digital assets and blockchain, we recommend that the Government and regulatory agencies proceed carefully and do not design and implement a fully integrated and consistent regulatory framework for digital assets at this point in time. Instead, we recommend that problems are addressed as they arise. We recommend that the Government and regulators create coherent and consistent guidance on the treatment of digital assets under current law.

[318] A licensing regime would go further than the current requirements for all financial service providers to register under the FSP Act and, if they provide services to retail customers, join a dispute scheme.

[319] https://treasury.gov.au/consultation/c2022-259046.

[320] https://www.gillibrand.senate.gov/imo/media/doc/Lummis-Gillibrand%20Section-by-Section%20%5bFinal%5d.pdf.

[321] Paragraph 2.1 of https://www.oecd.org/daf/fin/financial-markets/Regulatory-Approaches-to-the-Tokenisation-of-Assets.pdf.

Regulation and resources to protect consumers in New Zealand

282. Consumer protection regulations are paramount to safeguard consumer interests and ensure transparent and fair service levels. For instance, the responsibilities of a custodian of cryptocurrencies (e.g., VASP) are no different from its responsibilities for other financial instruments (e.g., safeguarding customer assets).

283. Measures should be directed at the prevention of unfair, deceptive or abusive practices, and the reduction in harm to end users, including the loss of assets, fraudulent behaviour and cybersecurity risks. Broadly speaking, the types of concerns and risks to consumers of digital assets and related services will typically be the same as for existing financial services.[322]

284. However, there are some challenges and risks specific to digital assets and their nature. These include the lack of payment protections due to the irreversibility of transactions, difficulty establishing accountability towards users due to the decentralised management of cryptocurrencies, privacy risks from the pseudonymous nature of some digital assets (hides personally identifiable information but the keys can include identifiers), and different ways customers can hold digital assets (particularly in self-hosted environments such as in decentralised finance where there is no firm holding assets on behalf of a consumer and consumers are in full control of their digital assets).[323]

285. Regulatory guidance such as in custody arrangements and minimum technology and security standards for the underlying technology for businesses engaged in some of these areas would be a suitable measure. This will require regulators to increase their technical knowledge and capabilities. Regulators should also start, or continue, to collect complaints and concerns from the public as well as to provide information publicly about the benefits, best practices and risks of such technology as a matter of public education and resources. Educating the public may be a key aspect in helping address many of the concerns of self-hosted environments.[324]

286. Regulators should also keep in mind the following submission made by the law firm Stace Hammond in relation to the forms of engagement:[325]

> *We add that guidance and engagement by regulators should utilise various forms, not just writing on the regulators' websites. Because humans of different generations and cultures absorb communication differently in the digital age, regulators should also utilise video, audio, memes, and gifs across a range of platforms.*

287. So far, consumer protection measures have been reactive. Little has been done in New Zealand, to our knowledge, to raise awareness of dispute resolution in relation to digital assets (other than the *Cryptopia* case). We understand there are some examples globally of organisations, particularly alternative dispute resolution providers, creating protocols to assist in disputes arising from blockchain transactions. We describe three of these below:

(a) JAMS was the first institutional alternative dispute provider to create protocols supporting resolution methods for disputes arising from blockchain activities, including small contracts. It offers clauses, rules and procedures designed to meet parties' needs, including smart contracts;[326]

(b) The UK Jurisdiction Taskforce published a procedural framework for the resolution of disputes by arbitration under English law. It has the aim of enabling fast, innovating and cost-effective resolution of blockchain and crypto-disputes as part of the drive to establish the United Kingdom's dominate in the digital asset world. The rules allow for arbitrators to

---

[322] https://www3.weforum.org/docs/WEF_Navigating_Cryptocurrency_Regulation_2021.pdf at page 9.

[323] https://www3.weforum.org/docs/WEF_Navigating_Cryptocurrency_Regulation_2021.pdf.

[324] https://www3.weforum.org/docs/WEF_Navigating_Cryptocurrency_Regulation_2021.pdf.

[325] https://www.parliament.nz/resource/en-NZ/53SCFE_EVI_111968_FE2063/b953501467966307d940ea585246e443da3af9c2 at [1.9].

[326] https://www.jamsadr.com/rules-smart-contracts.

implement decisions directly on-chain using a private key and optional anonymity of the parties;[327] and

(c) Kleros is a decentralised open source online dispute resolution protocol for disputes over digital assets and is the winner of Blockchains for Social Good Prize from the European Union's Horizon 2020 research and innovation programme.[328]

288. Regulators such as the FMA and the Commerce Commission must be adequately resourced to enforce the law. They must have the courage of their convictions, with a thorough understanding of the industry, to ensure that consumer complaints are properly investigated and resolved.[329]

289. We recommend the creation and introduction of a best practice code or guidance with minimum standards that apply to the custody of digital assets, regardless of whether the digital assets is a financial advice product or not, and whether it is in respect of a retail client or wholesale investor. For the best practice code or guidance to be effective, it should be developed in consultation with technical experts in digital asset custody. Thought needs to be given to persons who provide regulated client money or client property services and how and if the existing regime, or a modified version of it, will apply in respect of this requirement.

290. The FMA and the Commerce Commission should collaborate and continue their work (and in the case of other regulators, start) to make available information about digital asset scams using social media and other forms including videos, memes, gifs, etc. We also recommend that uptake, clicks and views on these campaigns are monitored to see if they are reaching retail clients and adjust approaches if it is not working.

291. As part of the social media education campaigns, agencies should review their existing materials and content on digital assets and related services and technology and align messaging to ensure it is consistent. For example, messaging on the Consumer Protection website states that "Buying cryptocurrency is speculation – not investment"[330] which conflicts with the FMA's statements that suggest it is an investment (but noting it as a speculative product).[331]

292. MBIE could consider using its regulation making powers to add a defined class of digital assets which are used for investment purposes as a new category of "financial advice product" (but not, to be clear, a new "financial product"). This would have the effect of bringing advice given as to the acquisition or disposal of such digital investment assets within the financial advice and client money and client property regimes. The creation of a new category of financial advice product would require licensing for businesses which give advice on such digital investment assets to retail clients and would ensure that custody duties and obligations (including assurance reports) were the same as for holding more traditional assets. Care would be needed to ensure that the class of digital investment assets was not so broad as to inhibit the use of tokens and related technology for non-investment purposes and/or exemptions should be available in such circumstances. For example, graphic designers that create a DAO to run/coordinate their activities. While the tokens grant governance and ownership rights (so equity) and new members need to apply to the DAO, the issuing of tokens for such a DAO shouldn't come within the financial advice regime

[327] https://35z8e83m1ih83drye280o9d1-wpengine.netdna-ssl.com/wp-content/uploads/2021/04/Lawtech_DDRR_Final.pdf.

[328] https://kleros.io/.

[329] See, e.g, in the United Kingdom, https://decrypt.co/37912/onecoin-lawyers-persuaded-uks-fca-to-take-down-scam-warning.

[330] https://www.consumerprotection.govt.nz/news-and-media/scam-alert-stay-safe-from-cryptocurrency-scams/.

[331] https://www.fma.govt.nz/investors/ways-to-invest/cryptocurrencies/.

We recommend:

Recommendation #3
We recommend that the Government ensure that regulators (in particular, the Financial Markets Authority (**FMA**) and the Commerce Commission) are well resourced to deal with bad actors in the digital asset space, and ensure consumers have confidence interacting with digital assets, whether for investment, business, or enjoyment. Information on digital asset scams is easily available.
Recommendation #4
We recommend that the digital assets industry in New Zealand, in consultation with regulators, develops a best practice code or guidance with minimum standards for the custody of digital assets.
Recommendation #5
We recommend that the Government direct the Ministry of Business, Innovation and Employment (**MBIE**), in consultation with the FMA and the industry, to use its regulation-making powers to add a defined class of digital assets which are used for investment purposes as a new category of "financial advice product" (but not, to be clear, a new "financial product") to bring them into the regulated financial advice and client money–client property services regimes.

Regulation to encourage growth of industry

293. New Zealand should adopt a technologically neutral approach. Where new technology enables activities that are mostly the same as existing activities, the starting assumption is that the law treats the two activities similarly. Wherever possible, the law should be neutral to the technology and any variations in legal treatment should come from (and be tailored to) material variations in the business or risks associated with the technology.[332]

294. The FMA and the IRD have had an open-door policy to discuss innovations on a case-by-case basis. In addition, recently the FMA, RBNZ, Commerce Commission, MBIE and the Treasury have set up the Fintech Forum,[333] to, amongst other things, provide information or guidance on regulatory matters. The Fintech Forum does not provide direct support or work in partnership with innovators, its purpose is to ensure that innovators understand the regulatory requirements that apply to them.[334] While the Fintech Forum should continue, it would be prudent to follow Australia and the United Kingdom, and other countries, and create a formal sandbox regime.

295. A "sandbox" can mean different things to different people. The German Federal Ministry for Economic Affairs and Climate Action provides a good definition:[335]

> *Regulatory sandboxes enable in a real-life environment the testing of innovative technologies, products, services or approaches, which are not fully compliant with the existing legal and regulatory framework. They are operated for a limited time and in a limited part of a sector or area. The purpose of regulatory sandboxes is to learn about the opportunities and risks that a particular innovation carries and to develop the right regulatory environment to accommodate it. Experimentation clauses are often the legal basis for regulatory sandboxes.*

296. As the above definition makes clear, the purpose of a sandbox is for the regulators to learn about the opportunities and risks of an innovation, which will allow for the development of the right regulatory environment. For regulators to learn they must engage with the people and organisations the

[332] https://www.coindesk.com/layer2/2022/06/16/the-case-for-technological-neutrality-in-web3/?utm_source=Sailthru&utm_medium=email&utm_campaign=NODE%20JUNE%2016%202022&utm_term=The%20Node.

[333] fintech.govt.nz.

[334] https://fintech.govt.nz/how-we-can-help/.

[335] https://www.bmwk.de/Redaktion/EN/Dossier/regulatory-sandboxes.html.

sandboxes' participants. A successful example of such engagement can be seen in United Kingdom's Financial Conduct Authority's 'Regulatory sandbox lessons learnt report'.[336]

297. The entry requirements for the sandbox should enable a wide array of participants, particularly startups and community groups or organisations. For example, the Australian sandbox requirements were changed significantly as too few people and organisations were able to use it.[337] And, in line with Australia, if the entry requirements are met people and organisations are entitled to enter the sandbox. This in in contrast to, for example, the United Kingdom scheme mentioned above, which used an application process with around one third of applicants accepted into the sandbox.

298. Access to the sandbox should be reviewed regularly to ensure it is working as intended (see, for this purpose, Recommendation #12 in relation to the proposed annual review of the digital asset industry). In our view, the FMA as the co-ordinator of the CoFR, is best placed to act as lead agency in the creation of the sandbox.

We recommend:

Recommendation #6
We recommend that the Government adopt a technologically neutral approach to regulation of the digital asset space, tailoring measures in relation to digital assets and related services and technology as required to deal with material risks associated with them.

Recommendation #7
We recommend that the Government direct the FMA (as lead agency) to establish a formal sandbox to allow organisations to test innovations in relation to digital assets and digital asset services. A formal sandbox signals that New Zealand is keen to facilitate the growth of this industry and would assist regulators' knowledge of the technology, developments, and ventures in this area.

Which agency/ies should have the primary regulatory role(s)?

299. New Zealand's approach for regulating financial products and services has been for agencies to primarily work in siloed areas. For example, VASPS are dealt with by the DIA in respect of AML/CFT obligations, the FMA deal with other financial service providers in relation to digital asset activities, and the RBNZ deal with CBDCs and financial stability and monetary system issues. Other government agencies such as Consumer Protection (which is part of MBIE) also alert people in relation to digital-asset-related scams.[338]

300. Because the issues in relation to digital assets and blockchain span different agencies a coordinated approach is required. While some agencies have conferred with each other, the outcomes of these decisions have not been made clear (except in relation to AML/CFT where, for example the FMA defers to the DIA, etc). Because of the wide range of uses for digital assets, we do not recommend a single primary *regulator* for digital assets, although we acknowledge in our recommendations the role for a lead agency in developing a sandbox (Recommendation #7).

---

[336] https://www.fca.org.uk/publication/research-and-data/regulatory-sandbox-lessons-learned-report.pdf.

[337] https://asic.gov.au/for-business/innovation-hub/enhanced-regulatory-sandbox/info-248-enhanced-regulatory-sandbox/.

[338] https://www.consumerprotection.govt.nz/news-and-media/scam-alert-stay-safe-from-cryptocurrency-scams/.

We recommend:

Recommendation #8
We recommend that there should be no single primary *regulator* for digital assets, as digital assets cover a spectrum of use cases, well beyond investment.
Recommendation #9
We recommend that the Government direct the FMA (as lead agency) to create a sub-committee of the Council of Financial Regulators[6] for digital assets and virtual asset service providers, comprising a cross-agency team, including the present members (FMA, Reserve Bank of New Zealand, Commerce Commission, MBIE, and the Treasury) and the Department of Internal Affairs (**DIA**). The group would be active and provide coordinated responses to issues facing the industry and contribute guidance and resource, and to the development of the industry in New Zealand.

Industry support and development

Digital Assets Cross-Agency Working Group

301. In New Zealand, business, government departments and others have been working on various aspects of blockchain and cryptocurrencies for many years, with some beginning work more recently. However, despite, often considerable work being undertaken, the work has been disjointed and progress on many factors has been slow and precious resources and time have and are being lost. Even at a Parliamentary level in New Zealand the level of active interest and engagement with blockchain has been low, in contrast, some countries have blockchain groups within Parliament, for example, the UK has The Crypto and Digital Assets All-Party Parliamentary Group (APPG), and Australia had a Parliamentary Friendship Group for Blockchain. In the meantime, other countries that New Zealand likes to compare itself to are capitalising on blockchain as New Zealand struggles to keep up.

302. To harness and share knowledge and experience, and to help operationalise the changes needed, we recommend the creation of a number of difference advisory and other groups. Other countries including the UK have created advisory and other groups.

303. Blockchain and digital assets sit across all government departments, although some will have a greater role than others, therefore a cross-agency approach is necessary. It is counter-productive, to continue the current practice of different departments working on blockchain and cryptocurrency related issues with limited linkages between the departments.

304. For this reason, we propose the creation of a cross-agency working group (**Digital Assets Cross-Agency Working Group**) comprising at a minimum members from the FMA, MBIE, DIA, Treasury, IRD, MoJ, Government Communications Security Bureau (**GCSB**), the Financial Intelligence Unit of the New Zealand Police (**FIU**), and the RBNZ. This group should feature people at senior levels and no more than two from a single department.[340] To ensure that the focus of the group shifts regularly across the wide range of uses for digital assets, we recommend that the leadership (chair) of the group should rotate between the member agencies on a periodical basis. In our view, this is important to ensure equal time and focus on the different aspects of the industry and technology.

305. For the Digital Assets Cross-Agency Working Group to be effective, it must regularly engage with the digital assets industry. At a minimum, this engagement should include industry representatives attending meetings and deliberations where appropriate.

306. The recommendation of a cross-agency working group is not new. In 2018, the *Distributed Ledgers and Blockchains Opportunities for Aotearoa New Zealand Report*, recommended the creation of

[339] https://www.cofr.govt.nz/about-us/index.htm.

[340] If there are two from a department, the people must be in separate divisions/groups within that department.

such a group.[341] In 2019, BlockchainNZ urged the New Government to take a holistic approach to opportunity and risks that blockchain provides and create a cross industry working group or task force.[342]

307. During the course of the Inquiry MBIE released a draft Long-Term Insights Briefing on "The future of business for Aotearoa New Zealand: An exploration of two trends influencing productivity and wellbeing – purpose-led business and use of blockchain technology".[343] The consultation on the draft Long-Term Insights Briefing also took place during the course of the Inquiry, however, the findings of the consultation had not been released at the time of writing this report. The findings from that consultation should be considered by the Committee and explored further in relation to digital assets.

We recommend:

Recommendation #10
We recommend that the Government direct the creation of a cross-agency working group (**Digital Assets Cross-Agency Working Group**) to lead the Government's work with industry in the development of policy for digital assets in New Zealand. At a minimum, this should comprise members from the FMA, MBIE, DIA, the Treasury, Inland Revenue, the Ministry of Justice, the Government Communications Security Bureau (**GCSB**), the New Zealand Police's Financial Intelligence Unit, the Reserve Bank of New Zealand, and Callaghan Innovation. We recommend that the leadership (chair) of the Digital Assets Cross-Agency Working Group should rotate between the member agencies.

'Blockchain-sprints'

308. New Zealand should also consider adopting some of the strategies the United Kingdom Government is taking to make Britain a global hub for cryptoasset technology and investment.[344] One measure includes the FCA (Financial Conducts Authority) holding a series of 'crypto-sprints' with industry participants which seeks views from the industry on issues relating to the development of a digital asset regime:[345]

> *"The sprints will inform FCA policy thinking in real time, and participants will be tasked with wrangling some of the legal, technical and regulatory challenges the industry faces, and then coming up with practical solutions which, we the [UK] government, will take forward as quickly as we can."*

309. As John Glen, Economic Secretary to the UK Treasury, noted the work on cryptoassets in the UK requires *"talk then determined, concrete action. Informing and accelerating work being done elsewhere, including by regulators".*[346]

We recommend:

Recommendation #11
We recommend that the Digital Assets Cross-Agency Working Group hold "blockchain-sprint" equivalent or similar events to develop new ideas and strategies for industry growth.

[341] https://www.callaghaninnovation.govt.nz/sites/all/files/distributed-ledgers-and-blockchains-report-december-2018.pdf at page 40.

[342] https://blockchain.org.nz/wp-content/uploads/sites/28/2019/07/BlockchainNZ-Letter-to-Prime-Minister-July-2019..pdf.

[343] https://www.mbie.govt.nz/dmsdocument/20250-the-future-of-business-for-aotearoa-new-zealand.

[344] https://www.gov.uk/government/news/government-sets-out-plan-to-make-uk-a-global-cryptoasset-technology-hub.

[345] https://www.fca.org.uk/firms/cryptoassets/cryptosprint and also https://www.gov.uk/government/speeches/keynote-speech-by-john-glen-economic-secretary-to-the-treasury-at-the-innovate-finance-global-summit.

[346] https://www.gov.uk/government/speeches/keynote-speech-by-john-glen-economic-secretary-to-the-treasury-at-the-innovate-finance-global-summit.

Holding to account and assessment of progress

310. The creation of the Digital Assets Cross-Agency Working Group does not guarantee that concrete action will occur. To guard against a failure to operationalise agreed upon courses of action by the Government, we recommend an independent person or organisation prepare a yearly report on the blockchain sector in New Zealand for the next six years.

311. Innovation Eye in the United Kingdom prepares such a report for the United Kingdom Government. In 2021 Innovation Eye released the "Blockchain Industry in the UK Landscape Overview 2021: Companies, Investors, Influencers and Trends".[347]

312. In New Zealand, the report could be paid for by the Government through Callaghan Innovation. The reason for Callaghan Innovation involvement is due to its involvement in the digital asset space for some time and its focus is on promoting technology and innovation in New Zealand. The report would include blockchain both in the private and public sector. The report would not be confined to use cases, it would also report on needed, proposed and implemented legalisation and changes to government practices. In addition, it would assess the legislation and changes to government practices and recommend changes where appropriate.

We recommend:

Recommendation #12
We recommend that the Government, via Callaghan Innovation, appoint an independent person or organisation to prepare a yearly report on the blockchain sector in New Zealand for the next six years.

Immigration

313. Currently, many countries are facing brain-drain as the world continues to open up following the Covid restrictions. New Zealand has the opportunity to position itself as a place that great talent will want to work and share skills.

We recommend:

Recommendation #13
We recommend that the Government direct Immigration New Zealand and related departments, in consultation with industry, to continue to expand where necessary the skills shortages list to include persons with skills in the areas of digital assets and blockchain more generally.

Education

314. Many important parts of Government and the professions lack knowledge about blockchain and digital assets. Development of the industry requires significantly greater knowledge by Government and the professions.

315. Equally, students at all levels should have the opportunity to develop their understanding of digital assets (and the broader Web3 context).

[347] https://analytics.dkv.global/Blockchain-in-the-UK-2021/Full-Report.pdf.

We recommend:

Recommendation #14
We recommend that secondary and tertiary educational institutions consider development of courses in relation to digital assets, blockchain and the broader Web3 context, as part of a wider focus on technology (and its place in New Zealand's future).
Recommendation #15
We recommend that the Government and the digital assets industry in New Zealand develop training and educational resources, including: (a) professional bodies, such as accountants and lawyers to ensure their members receive the necessary training in relation to blockchain and digital assets; (b) Te Kura Kaiwhakawā (Institute of Judicial Studies) to ensure that judges receive training in blockchain and digital assets; (c) training in blockchain and digital assets to be made available to Government departments with a number of people within each agency receiving training; and (d) financial dispute resolution schemes to train their staff in relation to disputes involving blockchain and digital assets.

Taxation

316. We see two broad approaches that New Zealand could adopt towards the taxation of cryptoassets:

    (a) Continue with the ad hoc and belated approach New Zealand has taken to date, seeking to address technical issues in sporadic amendments to the Tax Acts as they come; or

    (b) Take a more "hands off" approach to this sector, introducing broader tax concessions (e.g. rollover relief until cryptoassets are converted to fiat) to let the New Zealand blockchain sector flourish.

317. We consider the first approach, ad hoc and belated, would likely jeopardise New Zealand's opportunity to become a leading jurisdiction for blockchain development and investment. We are already seeing blockchain entrepreneurs seriously consider taking their ventures offshore to jurisdictions where they would not face these issues.

318. The second, more "hands off" approach is more daring. It would involve risking some tax, in exchange for making New Zealand a more attractive blockchain destination, and potential a hub for innovation in this space.

319. Ultimately this is a decision for policy makers. The first approach is certainly more in keeping with New Zealand's general approach to tax. But, in our view, there would be merit in considering the second approach in more detail.

We recommend:

Recommendation #16
We recommend that Inland Revenue explore, in consultation with the digital assets industry in New Zealand, whether tax incentives for digital asset service providers are necessary or appropriate, in addition to continuing work to provide clarity around the treatment of digital assets within the tax system, to encourage investment of capital in New Zealand as well as enhance the competitiveness of the New Zealand tax system.

Other legal issues

Property law

320. A clear legal understanding of how digital assets fit within the law of property is important as a strong basis for legal interactions. Fortunately, New Zealand can draw on the recent extensive work of the UK Law Commission in this area, including its detailed 500 plus page consultation paper on "Digital Assets."[348]

321. The UK Law Commission initially recommended clarifying UK law in three primary areas:

(a) Creating a third category of personal property, which the UK Law Commission describes as "data assets". Currently, the law recognises two main types of personal property: things in possession and things in action. Digital assets do not fit neatly within one or the other.

(b) An innocent acquisition rule. Such a rule would mean that, for example, if someone purchased a stolen NFT, that person would be entitled to keep the NFT if they purchased it not realising it had been stolen. (This is called being a bona fide purchaser for value without notice and is used in other areas of the law). Granted the victim of the NFT theft will lose out, but the effect on innocent purchasers must also be taken into account. The UK Commission, after weighing the options, has come down in favour of purchasers.

(c) A requirement for a general pro rata shortfall allocation for comingled holdings of crypto-tokens when a custodian becomes insolvent.

322. In its final report,[349] however, the UK Law Commission has changed its position slightly in relation to the need for legislation, taking instead the view that the common law can develop suitable rules through decisions of the Courts, rather than needing a statutory intervention.

323. Given the uncertainty of relying on the common law to develop, which can take many years, particularly in a jurisdiction such as New Zealand where there is more limited litigation of issues, New Zealand should still consider moving more quickly in this area, in line with the UK Law Commission's initial proposals for legislative reform. For completeness, given the work of the UK Law Commission, we do not consider that these issues require extensive study by our own Law Commission. Any differences or issues between New Zealand and the United Kingdom could be dealt with through the legislative process.

[348] https://www.lawcom.gov.uk/project/digital-assets/. See the more detailed discussion in Appendix 2.

[349] https://s3-eu-west-2.amazonaws.com/lawcom-prod-storage-11jsxou24uy7q/uploads/2023/06/Final-digital-assets-report-FOR-WEBSITE-2.pdf.

We recommend:

Recommendation #17
We recommend that MBIE explore whether a legislative intervention as proposed by the UK Law Commission in its initial consultation should be adopted in New Zealand to remove uncertainty through the creation of: (a) a third category of personal property ("data assets"); (b) an innocent acquisition rule; and (c) a general pro rata shortfall allocation rule for comingled holdings of crypto-tokens when a custodian becomes insolvent.

Anti-money laundering and countering financing of terrorism

324. See our discussion in Part 2 above about possible changes to the AML/CFT Act following the current AML/CFT review.

325. We considered but do not recommend simply amending the AML/CFT Act to align with the FATF Recommendations in relation to VASPs. We understand that submissions on this were made in response to the AML/CFT review consultation. The Ministry of Justice has concluded its review (in June 2022) with a report to the Minister of Justice, outlining whether amendments to the AML/CFT Act are necessary or desirable.[350] That report was tabled in Parliament on 7 November 2022.[351]

We recommend:

Recommendation #18
In assessing its response to the issues raised in the Anti-Money Laundering and Countering Financing of Terrorism Act (**AML/CFT Act**) review, and in consultation with the proposed Digital Assets Cross-Agency Working Group and industry, we recommend that the Ministry of Justice's continuing process of amendments to the AML/CFT Act and regulations and guidance balances combatting genuine money-laundering and terrorism financing risks against the threats to innovation and industry of overly strict rules. Without an appropriate balance, overly strict rules threaten innovation and industry in New Zealand as businesses wishing to use digital assets (such as tokens) may relocate to other jurisdictions where rules are clearer or more light-touch. Clear territorial application rules are also needed to ensure cross-border commerce is easy for overseas businesses regulated for AML/CFT in their home jurisdictions, where those jurisdictions follow the same FATF principles as New Zealand.

Decentralised autonomous organisations (DAOs)

326. New Zealand will need to accommodate DAOs in the near future, which will require legislative change. Without legislative change, DAOs set up in New Zealand are likely to register as legal entities overseas. We do not, however, recommend immediate legislative action, in contrast to Australia, which has stated its intent to establish a new DAO company structure. The reason for not simply following Australia is because DAOs are not limited to for-profit purposes, thus amending New Zealand's company law will not adequately address the issue of the legal regulation of DAOs. It is prudent therefore to keep a close watching brief on international developments with a view to legislative change. New Zealand would therefore be a fast follower in this area.

[350] https://consultations.justice.govt.nz/policy/aml-cft-review/#:~:text=The%20Ministry's%20review%20will%20conclude,amendments%20are%20necessary%20or%20desirable.

[351] https://www.justice.govt.nz/assets/Documents/Publications/AMLCFT-Statutory-Review-Final-Report-v2.pdf.

We recommend:

Recommendation #19
We recommend that the proposed Digital Assets Cross-Agency Working Group monitor closely international developments on the legal recognition and treatment of decentralised autonomous organisations (**DAOs**) and be ready to move quickly (as a "fast follower") if a consensus emerges. In the meantime, we recommend that regulators should (whether through a sandbox or otherwise) be patient and tolerant with industry "hacking" existing structures to explore the use cases for DAOs.

Access to banking services

327. A significant obstacle raised during submissions is the issue of de-banking and the lack of access to banking for businesses and persons involved with digital assets. As the Australian Senate Report notes, although a country is a member of FATF, the standards require banks to take a risk based approach to enforcement and this approach should not result in de-banking of entire sectors.[352] Instead, there should be appropriate consideration of the risk and risk mitigation strategies of individual applicants.

328. The proposed Digital Assets Cross-Agency Working Group should also consider the recommendations from the 2019 Australian Competition and Consumer Commission's inquiry into the supply of foreign currency conversion services in Australia[353], and develop a scheme for the New Zealand context to address due diligence requirements of banks to be put in place.

329. We recommend the RBNZ (either alone or as part of the Digital Assets Cross-Agency Working Group):

(a) consider the recommendations from the 2019 Australian Competition and Consumer Commission's inquiry into the supply of foreign currency conversion services in Australia[354], and develop a scheme for the New Zealand context to address due diligence requirements of banks; and

(b) follow the recommendation of the Australian Senate Report, which the Australian Government has accepted,[355] and develop a clear process for businesses that have been de-banked.

330. In each case, any process should be wider than simply organisations dealing in digital assets and would include those in the fintech sector as well as money remitters.

We recommend:

Recommendation #20
We recommend that the Reserve Bank (either alone or as part of the Digital Assets Cross-Agency Working Group) develop a scheme for the New Zealand context to address due diligence requirements of banks to ensure organisations dealing with digital assets are able to access banking services.

[352] https://parlinfo.aph.gov.au/parlInfo/download/committees/reportsen/024747/toc_pdf/Finalreport.pdf;fileType=application%2Fpdf at page 142.

[353] https://www.accc.gov.au/system/files/Foreign%20currency%20conversion%20services%20inquiry%20-%20final%20report_0.PDF.

[354] https://www.accc.gov.au/system/files/Foreign%20currency%20conversion%20services%20inquiry%20-%20final%20report_0.PDF.

[355] https://treasury.gov.au/review/de-banking/tor.

Recommendation #21
For organisations found to have been improperly de-banked, we recommend that the Government ensures they can access banking services, whether through the bank found to have improperly de-banked them, or through a government-owned entity such as Kiwibank.

Central bank digital currency

331. The RBNZ is exploring the development of a central bank digital currency (CBDC) New Zealand dollar. This is important work and we consider the RBNZ is taking an appropriately careful but open approach to creating something workable and innovative.

We recommend:

Recommendation #22
We recommend that the Reserve Bank continue with its CBDC design work.

Appendix One: Submissions received

1. A total number of 263 submissions were received in response to the terms of inquiry.

2. Submissions were received from individuals, digital asset businesses, organisations supporting them, such as law firms, and a range of other organisations including government departments.

List of submitters

Aaron Brunet
Aaron Rama
Adam Dodds
alan harris
Alex Adams
Alexandra McCorkindale
Alistair Keddie
Alistair Litt
Alister Gray
Andrew Gillick
Andrew Parrish
Andrew Payne
Andrew Shaw
Andrew Snail
Andrew Wells
Andy Linton
Andy Schmidt
Andy Stretton
Annarosa Paselio
AnneMarie Curtis
Anton Hughes
Arden Roberts
arthur falls
Athol Davies
Ben Fitzgerald
Ben Norquay
Ben Reid
ben vallance
Benjamin Beamsley
Benn Robinson
Bit Coin
Bitcoin Consulting Ltd
BitPrime
Blackout Games
BlockchainNZ (a member of the New Zealand Tech Alliance)
Bobby Chua
Borian Milic
Bradley Rowe
Bradley Taylor
Brian Thom
Bronwyn Howell
Bruce Bauld
Bruce Strange
cantillon investments limited
Captain America
Chanh Huynh
Charity Lim
Charlie Young
Chartered Accountants Australia and New Zealand
Chathu Muna
Chris Berriman
Chris Howard
Chris O'Donoghue
Christopher Woodhead
Connor Buchanan
Crypto Daddy
Cryptovoxels
Dajne Win
Dan Domingo
Daniel Fasnacht
Daniel Kells
Daniel Peacock
Daniel Quickenden
Danna Mason
Darcy Ungaro
David Smith
David Watson
David Workman
Dean Foster
Diego Nascimento
Digital Asset Industry Response Group Aotearoa NZ
Digital Mining Ltd
Douglas Mair
Duck Lawn
Easy Crypto
Eliot Stock
Elliott Marshall
Emma Phillips
Ethan Hill
EUGENE PADAEN
Felix Fisher
Fergus Burnett
Financial Markets Authority - Te Mana Tatai Hokohoko
Fletcher Pearson Riley
Fraser McConnell
gabriela gabriela
Gene Smith
Geoff Topeto
George Goodwin
George Zondagh
Graeme Wham
Grant Robinson
H Foulton
Hamish MacEwan
Hamish McCullough
Hanoz Bilia
Hayden Grey
Hayden Simpson
Heather Shields
Hotanya Ragtah
Iona Sipa
Iona Wassilieff
J F
Jack Williams
Jacqueline Land
Jade Marinkovich
James Holth
James Mackenzie
James Scaur
James Thorpe
James Turner
Jamie Karl
Jamie Ryan
Jan Lucks
Janine Grainger
Janine Macdonald
Jared Sinkinson
Jarrod Johnson
Jeffrey Diaz
Jeremy Rees
Jeremy Santos
Jesse Maguire
Jevon Wright
Jim Hayde
Jinny Jun
Joel Pearson
John Gilder
Jonathan Clark
Jonathan Hughes
Jono Storey
Jonty Kelt
Jordan Oxborough
Joshua Arkwright
Jullietta Sauaso
Justin Macfarlane
Justin Page-lawrie
Justin Page-lawrie
Kahil Agnew
Kairo Key
Kampta Prasad Maharaj

Kane Wilson
Katya Curran
Kay Jones
keith howard
keith howard
Kirsten B. Rudolph
Klaus Schliebe
Kris Kennett
L'Authentique Charcuterie and Cucina Foods
Leo Murray
Leroy Brown
Liam van den Heuvel
Lindon Investments Limited
Lindon Keith
Lindsay Jopson
Lisa Lewis
Lloyd Brown
Logan Chalmers
Logan Merrett
Lorenzo Mentz
Louise Macfarlane
Luke Kemeys
Luke Moratti
Lyndon Burford
Lynette Ledingham
Mahtab Assadian
Marc Krisjanous
Marco Duthie
Mark Hall
Mark O'Connor
Mark Osborne
Mark Pascall
Mark Penrice
Mark Smith
Martin Wheeler
Matt Taylor
Matt Tompkins
Matthew Hartstonge
Melvin Leavasa
Michael Carrigan

Michael Dunn
Michael Green
Michael Piane
Michael Skinner
Michael Smith
Michael Te Whaiti
Mijean Le Noel-Wetere
Mike Shaw
Murray Grainger
Nate Ever
Nelson Shaw
New Zealand Council for Civil Liberties
Nicholas Weaver
Nick King
Nick Paterson
Nigel Wilson
Nuance Capital Limited
NZ Funds
NZTech and Blockchain NZ
Oliver Krollmann
Olivier Jutel
OnFinality Limited
Orladno Malo
Paul Hudson
Paul Marr
Paul McPhail
Paul Ranford
Peter Kenny
PricewaterhouseCoopers
qingyan hao
Rachael Wood
Ravi Kumar
Remco Mulder
Reserve Bank of New Zealand
Rick Ussher
Rob Mcgregor
Robert Boot
Rose Tukemata
Ross Bird
Ross Palethorpe

Rudi Prinsloo
Ryan Bosher
Sam Bevan
Sam Kim
Sam O
Sam Olorenshaw
Sarn Elliott
Satoshi Nakamoto
Scott Bradbury
Scott Gillies
Scott Twiname
Sean Kelly
Shane Left
Shaun Pandit
Shelly Hanbury
Sian Buley
Simon Duff
Simon Goo
Stace Hammond
Steve Yamamoto
Steven Ensslen
Steven Roigard
Stu Sontier
Sukhans Asrani
susan mason
Taane Taiepa
Tara Soe
TESTUDO
thorsten albers
Tim Davenport
Tim Pel van Rijnsoever
Tim Rowe
Tim Smith
Timothy Bingaman
Tom Huynh
Tracey Leyston
Troy Haronga
Vincent Sit
W Edwards
Wayne Gordon
Will Vickers
Xuzong Chen
Yajith Dayarathna

Appendix Two: International approaches

1. Many countries are grappling with the opportunities and risks presented by blockchain and digital assets. The following is snapshot of some of the approaches taken. This is not intended to be a comprehensive review. This section remains as at October 2022 and has not been further updated.

Australia

2. The Australia Government engaged with cryptocurrencies early. In 2014, the Senate referred an inquiry into digital currencies to the Senate Economics References Committee.[356] The resulting report "Digital Currency – Game Changer or Bit Player" was published in 2015.[357] Notwithstanding the name, the report focused on cryptocurrencies. The Committee, in acknowledging that cryptocurrencies presented opportunities as well as risks, recommended three main things:

   (a) Australia's tax rules be changed to accommodate cryptocurrencies;

   (b) the Australian Government consider establishing a Digital Economy Taskforce to gather further information to support regulators such as the Reserve Bank of Australia; and

   (c) ASIC to determine whether it was appropriate to regulate cryptocurrency businesses and that it should be considered whether the AML/CTF regulations should be applied to cryptocurrency exchanges.

3. The Australian Government agreed with and implemented the recommendations.[358]

4. In February 2020 the Australian Government released its National blockchain roadmap, as it realised it was needed to progress towards a blockchain-empowered future.[359]

5. Like New Zealand, Australia has accommodated some aspects of blockchain and cryptocurrencies by incorporating them into existing legislation and practices. For example, tax and cryptocurrency exchanges.

6. As with New Zealand, these accommodations have been piecemeal and fragmented.

7. More recently, in November 2021, the Select Committee on Australia as a Technology and Financial Centre released its Report, noting that "*[t]he scale and speed with which cryptocurrencies and other digital assets have progressed in recent years has surprised governments, regulators and policy makers*".[360]

8. The Report of the Select Committee included wide ranging recommendations. We have set out the recommendations in the table on the next page, together with the Advisers' views (based around the themes and recommendations in this Report) on whether New Zealand should follow Australia's lead in each case.

9. As can be seen, not all the Australian recommendations have been recommended for New Zealand for the reasons outlined.

---

[356] https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency.

[357] https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Digital_currency/Report.

[358] https://treasury.gov.au/sites/default/files/2019-03/Government_response_Senate-Committee_Digital-Currency-report-prod.pdf.

[359] https://www.industry.gov.au/data-and-publications/national-blockchain-roadmap.

[360] At page ix.

Australian recommendation	Recommended action in New Zealand
Australian Government establish a custody or depository regime for digital assets	Not recommended in New Zealand based on principle of technological neutrality. See Recommendation #4, however, in relation to development of industry codes or guidelines as use cases continue to develop.
Australian Government establish a market licensing regime for VASPs	Not recommended as use cases continue to develop and given the small size of New Zealand's industry. VASPs are already subject to registration under the FSP Act and subject to fair dealing conduct regulation. Recommendation #5, however, recommends creating a new class of 'financial advice product' which would mean that entities advising or encouraging consumers to invest in digital assets would require a financial advice provider licence from the FMA.
Australian Government conduct a token mapping exercise to determine the best way to characterise the various types of digital asset tokens in Australia	Not recommended as this exercise has already been done many times internationally and is likely to become outdated quickly. New Zealand can, in any event, have the benefit of the work done in Australia.
Australian Government develop a clear process for businesses that have been de-banked.	Agreed – see Recommendation #21.
Amend the Australian Capital Gains Tax (CGT) regime so that digital asset transactions only create a CGT event when they genuinely result in a clearly definable capital gain or loss.	Agreed tax changes required to avoid unwarranted taxation, see Recommendation #16.
Australian Treasury lead a policy review of the viability of a retail Central Bank Digital Currency in Australia.	Underway already in New Zealand as the RBNZ is conducting work to determine the viability of a New Zealand CBDC. See Recommendation #22.
Amending legislation so that businesses 'mining' digital assets and related activities in Australia receive a company tax discount of 10 per cent if they source their own renewable energy for these activities.	Not recommended as New Zealand wishes to encourage the use of blockchain that is not energy intensive.
Australian Government establish a new Decentralised Autonomous Organisation company structure.	New Zealand should monitor Australian (and international) developments on creating new statutory structures to accommodate DAOs with a view to being a 'fast follower', while encouraging development of DAO use cases for now within a sandbox (or otherwise tolerant) framework by 'hacking' existing legal structures. See Recommendation #19.

10. The Senate Report was well received by the Australian Government and in Australia work has begun in earnest on developing and implementing a more comprehensive and cohesive regulation to address issues arising with blockchain and cryptocurrencies. The proposed actions include:

    (a) Development and implementation for risk management expectations for regulated entities, including cryptocurrency exchanges and traditional banks, that hold or deal in 'crypto-assets' including stablecoins.[361] APRA (Australian Prudential Regulation Authority) is leading this work and expects operational risk standards to be effective in 2024 and 'crypto-asset' requirements effective in 2025. [362]

    (b) Amending Australia's Corporations Act to recognise and accommodate DAOs.

    (c) Conducting the token mapping exercise.[363]

    (d) Developing a clear process for businesses that have been de-banked.[364]

11. In March 2022 Senator Bragg, who lead the Senate Report, called for the Australian Government to enact a single Act to regulate cryptocurrencies and blockchain in Australia.[365]

United Kingdom

12. The UK government has been active in cryptocurrency and blockchain innovation for many years. In January 2016 the UK Government Office for Science released its Report on "Distributed Ledger Technology: Beyond Blockchain" by the Government's Chief Scientific Adviser.[366] In 2016 the UK established a regulatory sandbox,[367] which was open to blockchain companies. As of October 2021 the sandbox had supported 43 firms with cryptoasset or blockchain based innovations to enable live market testing.[368] In April 2022 the UK Government, in its "UK Regulatory Approach to Cryptoasset, Stablecoins and Distributed Ledger Technology in Financial Markets" announced a package of measures designed to make the UK a global cryptoasset technology hub.[369] Those measures included:[370]

    (a) legislating to bring stablecoins within the payments regulatory infrastructure so they can be used as a means of payment within the UK.

    (b) introducing a 'financial market infrastructure sandbox' to enable firms to experiment and innovate,

    (c) establishing a Cryptoasset Engagement Group to work more closely with the industry,

---

[361] https://www.apra.gov.au/crypto-assets-risk-management-expectations-and-policy-roadmap.

[362] https://www.apra.gov.au/crypto-assets-risk-management-expectations-and-policy-roadmap.

[363] https://treasury.gov.au/sites/default/files/2022-03/c2022-259046.pdf.

[364] https://treasury.gov.au/review/de-banking/tor.

[365] https://www.startupdaily.net/topic/cryptocurrency/senator-andrew-bragg-calls-for-a-single-act-for-the-australian-government-to-regulate-crypto-and-blockchain/.

[366] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/492972/gs-16-1-distributed-ledger-technology.pdf.

[367] https://www.fca.org.uk/news/press-releases/financial-conduct-authority%E2%80%99s-regulatory-sandbox-opens-applications.

[368] https://www.fca.org.uk/publication/annual-reports/perimeter-report-2020-21.pdf.

[369] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1066166/O-S_Stablecoins_consultation_response.pdf.

[370] https://www.gov.uk/government/news/government-sets-out-plan-to-make-uk-a-global-cryptoasset-technology-hub#:~:text=The%20government%20has%20today%20announced,for%20cryptoasset%20technology%20and%20investment.&text=Stablecoins%20to%20be%20brought%20within,a%20recognised%20form%20of%20payment.

(d) exploring ways of enhancing the competitiveness of the UK tax system to encourage further development of the cryptoasset market,

(e) working with the Royal Mint on a Non-Fungible Token (NFT) this summer as an emblem of the forward-looking approach the UK is determined to take

13. Other bodies based in the UK have been pro-active. In January 2022 the UK and Wales Law Society released the second edition of its "Blockchain: Legal & Regulatory Guidance".[371] This comprehensive guidance is just one of many moves to put "*English law front and centre as the legal foundation for blockchain*."[372]

14. However, the UK government is struggling with operationalising its desire to become a fintech and blockchain hub. For example, a number of companies providing cryptocurrency services were reported as likely to close their UK operations because the regulator (the Financial Conducts Authority) has been reported as being slow to approve applications and was often unresponsive, with the process being described as a "total disaster".[373] The firms affected included the $33 billion dollar fintech firm Revolut and Copper – the latter a crypto start-up that has Philip Hammond, a former UK Finance Minister, as one of its advisors.

15. In July 2022, the Law Commission of England and Wales published an extensive consultation paper on Digital Assets.[374] As the Law Commission observed in the Introduction on page 1:

> *"Digital assets are increasingly important in modern society. They are used for an expanding variety of purposes — including as valuable things in themselves, as a means of payment, or to represent or be linked to other things or rights — and in growing volumes. Electronic signatures, cryptography, smart contracts, distributed ledgers and associated technology have broadened the ways in which digital assets can be created, accessed, used and transferred. Such technological development is set only to continue."*

16. The Law Commission set out a number of proposals in the consultation paper, which include:[375]

(a) Explicitly recognising a distinct category of personal property under the law which is better able to accommodate the unique features of digital assets. The distinct category is provisionally called "data objects".

(b) Options for how this distinct category of personal property could be developed and implemented under current law.

(c) Clarifying the law around ownership and control of digital assets.

(d) Clarifying the law around transfers and transactions involving digital assets.

17. Also in July 2022, the Financial Services and Markets Bill was introduced to the United Kingdom Parliament. The Bill is intended to seize the opportunities of EU Exit, tailoring financial services regulation to local markets to bolster the competitiveness of the United Kingdom as a global financial centre and deliver better outcomes for consumers and businesses. Among other things, the Bill allows for the creation of "FMI sandboxes" designed to allow for:

---

[371] https://www.lawsociety.org.uk/topics/research/blockchain-legal-and-regulatory-guidance-second-edition.

[372] https://www.lawsociety.org.uk/topics/research/blockchain-legal-and-regulatory-guidance-second-edition.

[373] https://www.cnbc.com/2022/03/24/crypto-firms-face-being-booted-from-uk-as-fca-register-deadline-nears.html.

[374] https://www.lawcom.gov.uk/project/digital-assets/.

[375] https://www.lawcom.gov.uk/law-commission-proposes-reforms-for-digital-assets-including-crypto-tokens-and-nfts/. The final report of the Law Commission (as discussed in our recommendations) is available at https://s3-eu-west-2.amazonaws.com/lawcom-prod-storage-11jsxou24uy7q/uploads/2023/06/Final-digital-assets-report-FOR-WEBSITE-2.pdf.

(a) testing, for a limited period, the efficiency or effectiveness of the carrying on of financial markets infrastructure (FMI) activities in a particular way, and

(b) assessing whether or how relevant enactments should apply in relation to FMI activities carried on in that way.

United States of America

Federal

18. Prior to March 2022 there appeared to be no coherent plan concerning blockchain and cryptocurrencies at the federal level in the US. In March 2022, President Biden signed a wide ranging Executive Order on Ensuring Responsible Development of Digital Assets.[376] The Executive Order demonstrates a whole of government approach, and expresses the desire of the United States to retain its leadership in the global financial system and economic competitiveness, while at the same time protecting consumers, investors and business in the United States.

19. Nine reports have been released to date in answer to the Executive Order. following which the Biden-Harris Administration announced in September 2022 that it plans to (among other things):[377]

(a) protect consumers, investors and businesses by encouraging:

(i) regulators like the Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC), consistent with their mandates, to aggressively pursue investigations and enforcement actions against unlawful practices in the digital assets space;

(ii) Consumer Financial Protection Bureau (CFPB) and Federal Trade Commission (FTC), as appropriate, to redouble their efforts to monitor consumer complaints and to enforce against unfair, deceptive, or abusive practices;

(iii) agencies to issue guidance and rules to address current and emergent risks in the digital asset ecosystem. Regulatory and law enforcement agencies are also urged to collaborate to address acute digital assets risks facing consumers, investors, and businesses. In addition, agencies are encouraged to share data on consumer complaints regarding digital assets – ensuring each agency's activities are maximally effective; and

(iv) the Financial Literacy Education Commission (FLEC) to lead public-awareness efforts to help consumers understand the risks involved with digital assets, identify common fraudulent practices, and learn how to report misconduct;

(b) promote access to safe, affordable financial services by:

(i) encouraging the adoption of instant payment systems, like FedNow, by supporting the development and use of innovative technologies by payment providers to increase access to instant payments, and using instant payment systems for their own transactions where appropriate – for example, in the context of distribution of disaster, emergency or other government-to-consumer payments;

(ii) considering agency recommendations to create a federal framework to regulate nonbank payment providers;

---

[376] https://www.whitehouse.gov/briefing-room/presidential-actions/2022/03/09/executive-order-on-ensuring-responsible-development-of-digital-assets/.

[377] https://www.whitehouse.gov/briefing-room/statements-releases/2022/09/16/fact-sheet-white-house-releases-first-ever-comprehensive-framework-for-responsible-development-of-digital-assets/.

(iii) asking agencies to prioritise efforts to improve the efficiency of cross-border payments by working to align global payments practices, regulations, and supervision protocols, while exploring new multilateral platforms that integrate instant payment systems;

(iv) asking the National Science Foundation (NSF) to back research in technical and socio-technical disciplines and behavioural economics to ensure that digital asset ecosystems are designed to be usable, inclusive, equitable, and accessible by all; and

(c) fostering financial stability by asking the Treasury to:

(i) work with financial institutions to bolster their capacity to identify and mitigate cyber vulnerabilities by sharing information and promoting a wide range of data sets and analytical tools; and

(ii) work with other agencies to identify, track, and analyse emerging strategic risks that relate to digital asset markets. It will also collaborate on identifying such risks with United States allies, including through international organizations like the Organization for Economic Co-operation and Development (OECD) and the Financial Stability Board (FSB);

(d) advance responsible innovation by asking:

(i) the Office of Science and Technology Policy (OSTP) and NSF to develop a Digital Assets Research and Development Agenda to kickstart fundamental research on topics such as next-generation cryptography, transaction programmability, cybersecurity and privacy protections, and ways to mitigate the environmental impacts of digital assets. It will also continue to support research that translates technological breakthroughs into market-ready products. Additionally, NSF will back social-sciences and education research that develops methods of informing, educating, and training diverse groups of stakeholders on safe and responsible digital asset use;

(ii) the Treasury and financial regulators to, as appropriate, provide innovative United States firms developing new financial technologies with regulatory guidance, best-practices sharing, and technical assistance through things like tech sprints and Innovation Hours;

(iii) the Department of Energy, the Environmental Protection Agency, and other agencies to consider further tracking digital assets' environmental impacts; developing performance standards as appropriate; and providing local authorities with the tools, resources, and expertise to mitigate environmental harms. Powering crypto-assets can take a large amount of electricity—which can emit greenhouse gases, strain electricity grids, and harm some local communities with noise and water pollution. Opportunities exist to align the development of digital assets with transitioning to a net-zero emissions economy and improving environmental justice; and

(iv) the Department of Commerce to examine establishing a standing forum to convene federal agencies, industry, academics, and civil society to exchange knowledge and ideas that could inform federal regulation, standards, coordinating activities, technical assistance, and research support;

(e) reinforcing global financial leadership and competitiveness by asking:

(i) United States agencies to leverage the United States' positions in international organizations to message its values related to digital assets. United States agencies will also continue and expand their leadership roles on digital assets work at

international organizations and standard-setting bodies—such as the G7, G20, OECD, FSB, Financial Action Task Force (FATF), and the International Organization for Standardization. Agencies will promote standards, regulations, and frameworks that reflect values like data privacy, free and efficient markets, financial stability, consumer protection, robust law enforcement, and environmental sustainability;

(ii) the State Department, the Department of Justice (DOJ), and other United States enforcement agencies to increase collaboration with—and assistance to—partner agencies in foreign countries through global enforcement bodies like the Egmont Group, bilateral information sharing, and capacity building;

(iii) the State Department, Treasury, USAID, and other agencies to explore further technical assistance to developing countries building out digital asset infrastructure and services. As appropriate, this assistance may include technical assistance on legal and regulatory frameworks, evidence-gathering and knowledge-sharing on the impacts, risks, and opportunities of digital assets; and

(iv) the Department of Commerce to help cutting-edge United States financial technology and digital asset firms find a foothold in global markets for their products;

(f) fight illicit finance by:

(i) the President evaluating whether to call upon Congress to amend the Bank Secrecy Act (BSA), anti-tip-off statutes, and laws against unlicensed money transmitting to apply explicitly to digital asset service providers—including digital asset exchanges and nonfungible token (NFT) platforms. The President will also consider urging Congress to raise the penalties for unlicensed money transmitting to match the penalties for similar crimes under other money-laundering statutes and to amend relevant federal statutes to let the Department of Justice prosecute digital asset crimes in any jurisdiction where a victim of those crimes is found;

(ii) the United States continuing to monitor the development of the digital assets sector and its associated illicit financing risks, to identify any gaps in our legal, regulatory, and supervisory regimes. As part of this effort, Treasury will complete an illicit finance risk assessment on decentralized finance by the end of February 2023 and an assessment on non-fungible tokens by July 2023;

(iii) relevant departments and agencies continuing to expose and disrupt illicit actors and address the abuse of digital assets. Such actions will hold cybercriminals and other malign actors responsible for their illicit activity and identify nodes in the ecosystem that pose national security risks; and

(iv) asking Treasury to enhance dialogue with the private sector to ensure that firms understand existing obligations and illicit financing risks associated with digital assets, share information, and encourage the use of emerging technologies to comply with obligations. This will be supported by a Request for Comment published to the Federal Register for input on several items related to AML/CFT; and

(g) exploring a United States Central Bank Digital Currency (CBDC).

US States

20. Individual states, in contrast, to the Federal Government, have been more proactive and nimble with many amending legislating to facilitate the use of digital assets and other uses blockchain in their

states.[378] The most active state is Wyoming, which has passed more than a dozen blockchain focused laws,[379] in a bid to become the Delaware of digital assets.[380]

European Union

21. The European Commission recognises the importance of blockchain-based applications and the need for legal certainty and a clear regulatory regime.[381] The concern for the European Commission is to avoid legal and regulatory fragmentation if each member state develops separate rules, which has been the case in some EU member states.[382] To this end, the European Commission has proposed a new EU law on cryptoassets, the Markets in Crypto-assets, and amending Directive (EU) 2019/1937 (**MICA**).[383] The MICA text was agreed by member governments in the EU Council in October 2022 and is expected to take effect in 2024.[384]

Switzerland

22. Switzerland has long been recognised as supportive to fintech and blockchain.[385] Switzerland's Act to Adapt Federal Law to Developments in Distributed Ledger Technology (DLT Act),[386] came into force in stages, beginning on 1 February 2021.[387] The main features of the DLT Act is that it establishes trading and transfer of rights on the blockchain through electronic registers; segregation of crypto assets in the event of bankruptcy; and a new category of license for DLT trading schemes.[388]

Singapore

23. The regulator, Monetary Authority of Singapore (MAS), has been particularly engaged with industry. In November 2016 MAS partnered with R3, a blockchain technology company and a consortium of financial institutions on a proof-of-concept project to conduct inter-bank payments using blockchain technology.[389] This project became known as Project Urbin.[390] Based on the work and learnings from Project Urbin, MAS announced its Projected Guardian Project,[391] a collaborative project with MAS and industry to "*explore the tokenisation of financial assets and develop the future of finance infrastructure. The first industry pilot will explore potential DeFi applications in wholesale funding markets*."[392] It must be noted, however, that MAS is an integrated regulator and supervisor as well as Singapore's central bank. Thus it combines what would be many government departments, including the RBNZ, FMA, and aspects of the DIA and MBIE.

---

[378] https://www.coindesk.com/layer2/2022/06/08/as-federal-agencies-organize-us-states-continue-to-lead-in-regulating-digital-assets/#:~:text=Wyoming%20and%20Florida.-,New%20York,regulating%20virtual%20currency%20in%202015.

[379] https://www.gemini.com/cryptopedia/wyoming-blockchain-bill-law#section-utility-tokens.

[380] https://thedefiant.io/wyoming-is-turning-into-the-delaware-of-digital-assets/.

[381] https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-blockchain.

[382] See, for example, https://www.thomsonreuters.com/en-us/posts/wp-content/uploads/sites/20/2022/04/Cryptos-Report-Compendium-2022.pdf at pages 9-21.

[383] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0593.

[384] https://www.coindesk.com/policy/2022/10/05/eu-seals-text-of-landmark-crypto-law-mica-fund-transfer-rules/.

[385] https://thelawreviews.co.uk/title/the-financial-technology-law-review/switzerland.

[386] https://perma.cc/P9EC-PTUV.

[387] https://thelawreviews.co.uk/title/the-financial-technology-law-review/switzerland.

[388] https://www.loc.gov/item/global-legal-monitor/2021-03-03/switzerland-new-amending-law-adapts-several-acts-to-developments-in-distributed-ledger-technology/.

[389] https://www.mas.gov.sg/news/media-releases/2016/mas-experimenting-with-blockchain-technology.

[390] https://fintechnews.sg/51884/blockchain/project-ubin-exploring-the-benefits-of-a-blockchain-enabled-wholesale-cbdc/#:~:text=The%20journey%20of%20the%20multi,phase%20starting%20in%20November%202016.

[391] https://www.mas.gov.sg/news/media-releases/2022/mas-partners-the-industry-to-pilot-use-cases-in-digital-assets.

[392] https://www.mas.gov.sg/news/speeches/2022/speech-by-mr-heng-swee-keat-deputy-prime-minister-and-coordinating-minister-for-economic-policies-at-the-asia-tech-x-singapore-summit-on-31-may-2022.

24. Singapore is not surprisingly often cited as one of the most cryptocurrency friendly countries,[393] and more generally it is seen as supportive of technology-enabled start-ups.[394] However, Singapore is losing its desirability in the blockchain and cryptocurrency space for two main reasons. [395] First, its licensing regime has been too slow.[396] Second, the perceived heavy-handed limiting of crypto advertising so that VASPs and others can only advertise on their corporate websites, mobile apps or official social media accounts.[397] The reason given for the ban is that retail investors need protection because of the "high risks".[398] While banning the use of influencers to promote crypto assets is understandable, it is difficult to justify the targeting of VASPs given that in New Zealand platforms such as Sharesies and Hatch and so on are targeting often young people who are taking on the most risk with the least knowledge.[399]

China

25. China has not simply embraced blockchain, it has made significant progress implementing it. Following Xi Jinping's acknowledgment in 2019 that blockchain, was an "important breakthrough in independent innovation of core technologies",[400] China built its Blockchain-based Service Network (**BSN**). The BSN, which is now operating, is designed to "spur mass adoption of blockchain technology" within and outside China.[401]

26. China's, as part of its digital strategy, has also created and deployed its Digital Yuan, which is a CBDC.[402] The Digital Yuan is likely to have significant impacts on trade and in the medium may replace the United S dollar in trade between China and other countries.[403] Although the Digital Yuan does not use blockchain technology, it is likely to be used on the BSN.[404]

27. China, however, is an extreme example of embracing blockchain, but rejecting cryptocurrencies. China has attempted to restrict and ban the use of cryptocurrencies and other digital assets. In 2017 China banned ICOs,[405] and in 2021 it banned cryptocurrency transactions,[406] which included banning mining.[407] However, the attempts in practice do not appear to have been successful, for example, considerable underground mining of bitcoin still occurs in China.[408]

---

[393] https://cryptonewsfarm.com/germany-is-one-of-the-most-cryptocurrency-friendly-countries-in-the-world/ and https://cryptonewsbtc.org/2021/06/21/the-most-cryptocurrency-friendly-countries-in-the-world/.

[394] https://www.ey.com/en_sg/singapore-budget-2021/how-tax-can-help-anchor-singapore-as-the-start-up-hub-of-choice.

[395] https://www.bloomberg.com/news/newsletters/2022-04-12/singapore-ponders-what-crypto-friendly-means-bloomberg-crypto#:~:text=Singapore%20was%20considered%20%E2%80%9Ccrypto%20friendly,the%20industry%20to%20varying%20degrees.

[396] https://www.bloomberg.com/news/newsletters/2022-04-12/singapore-ponders-what-crypto-friendly-means-bloomberg-crypto#:~:text=Singapore%20was%20considered%20%E2%80%9Ccrypto%20friendly,the%20industry%20to%20varying%20degrees.

[397] https://www.channelnewsasia.com/business/cryptocurrency-service-providers-should-not-promote-their-services-public-says-mas-it-warns-high-risks-2440416.

[398] https://www.channelnewsasia.com/singapore/mas-no-cryptocurrency-advertisement-marketing-protect-retail-investors-2447321.

[399] https://www.interest.co.nz/personal-finance/108904/will-gamestop-saga-change-way-markets-operate-nzs-financial-markets-watchdog.

[400] https://www.cnbc.com/2022/05/16/china-blockchain-explainer-what-is-bsn-.html.

[401] https://exportsnews.com/post/chinas-blockchain-based-service-network-expands-operations-to-south-korea.

[402] https://www.adb.org/publications/the-peoples-republic-of-chinas-digital-yuan-its-environment-design-and-implications.

[403] https://www.silkroadbriefing.com/news/2020/07/22/digital-yuan-bsn-track-replace-us-dollar-china-trade/.

[404] https://www.ledgerinsights.com/china-bsn-blockchain-network-plans-multinational-cbdc-pilot-this-year/.

[405] https://www.bbc.com/news/business-41157249.

[406] https://www.theverge.com/2021/9/24/22691472/china-central-bank-cryptocurrency-illegal-bitcoin.

[407] https://www.cnbc.com/2022/05/18/china-is-second-biggest-bitcoin-mining-hub-as-miners-go-underground.html#:~:text=Among%20the%20steps%20China%20took,and%20Kazakhstan%2C%20which%20borders%20China.

[408] https://forkast.news/china-banned-bitcoin-mining-became-no-2-bitcoin-miner/.

Others

Bahamas

28. The Bahamas has a functional CBDC (Sand dollar).[409] The Digital Assets and Registered Exchanges Act (DARE) came into force in December 2020. The Act facilitates the registration of VASPs and regulates digital asset-based payment services businesses and the registration of financial services related to the creation, issues or sale of digital assets.

29. In April 2022 the Bahamas Government released its white paper on "The Future of Digital Assets in The Bahamas". The Bahamas Government's policy objectives are to:

    (a) explore new opportunities in a rapidly and continuously evolving NFTs, stablecoins and asset-referenced tokens;

    (b) improve the attractiveness of the Bahamas as a well-regulated jurisdiction where well-run digital asset businesses, of any size, can operate, grow, and prosper.

    (c) where necessary, to clarify and expand the scope of its legislative framework, generally, and the DARE Act, in particular, to continue to safely regulate digital assets and digital asset businesses;

    (d) encourage innovation in the Fintech space and identify emerging technologies that would help maintain the Bahamas' competitive advantage

    (e) explore linkages between the Bahamas' existing financial services toolkit (ie corporate and fiduciary services) to facilitate continued innovation in the international financial services sector.

    (f) Develop the necessary skills and expertise to fill jobs created in the Bahamian digital asset sector.

    (g) work with the Central Bank of the Bahamas to ensure that polices are adjusted and clarified to enable Bahamians to access digital assets in Bahamian Dollars (B$).

    (h) build capacity and expand the resources of the SCB in order to support and enhance its role as the pre-eminent digital asset regulator and to enable regulation of digital assets and digital asset businesses; and

    (i) provide sustainable funding for our digital asset policies, initiatives, and programmes.

Bermuda

30. Bermuda's Digital Asset Business Act in 2018 created a licensing regime for people or organisations carrying out the following in relation to digital assets in Bermuda:[410]

    (a) issuing, selling or redeeming virtual coins, tokens or any other form of digital assets;

    (b) operating as a payment service provider business utilising digital assets;

    (c) includes the provision of services for the transfer of funds;

    (d) operating as an electronic exchange;

---

[409] https://www.sanddollar.bs/about.

[410] https://www.bma.bm/digital-assets-supervision-regulation.

(e) providing custodial wallet services;

(f) operating as a digital assets services vendor.

31. The Digital Asset Issuance Act 2020 (**DAIA**) provides a regime for ICOs in Bermuda. Alongside the DAIA there is also the Digital Asset Issuance Rules 2020[411] and the Bermuda Monetary Authority's Statement of Principles for the DAIA,[412] as the Bermuda Monetary Authority (BMA) is responsible for overseeing the Act. People or organisations wishing to make an over to the public (over 150 persons) are required to file a business plan which is vetted by the BMA as well as meeting other requirements including disclosure document for potential investors. The BMA has considerable powers under the DAIA, they include:

(a) appoint a BMA-approved senior representative who must report certain events to the BMA (including whether there is a possibility of insolvency, failure to comply with BMA conditions, material misstatements and so on)

(b) material change approval requirements (such as if the entity plans to make a new offering of digital assets or wishes to make any change to its most recent issuance document)

(c) imposing a broad range of conditions, prohibitions or requirements such as removing officers, limiting the scope of the issuance and entering into any other class of transaction

(d) revoking the authorisation to act as a digital asset issuer; and

(e) winding up the issuer

(f) rights to obtain information and documents (including rights of entry)

32. The issuer must also seek the BMA's permission over changes to certain shareholders or majority shareholders as well as notifying the BMB of changes of directors, senior executives, managers or officers.

Cayman Islands

33. The Virtual Asset (Service Providers Act) 2020 (VASP Act) requires VASPs to be licensed or registered with the Cayman Islands Monetary Authority (CIMA). Alternatively VASPs can obtain a waiver from CIMA or hold a sandbox licence.

34. VASPs are defined more widely than in New Zealand and also cover the issuers of virtual assets in some situations. Activities that do not fall within the VASP Act are the issuing of newly created virtual assets where the issue is not to the public and/or where the transfer is not for fait currency, other virtual assets or other consideration. Therefore, airdrops and the like should not be caught by the VASP Act.

Dubai

35. Dubai has been an early leader in blockchain. In 2016 the Dubai Government announced it planned to use blockchain in all its government departments and be the world's first fully digitised city by 2021.[413] In 2017 the Dubai Smart Office launched its Dubai Blockchain Strategy, with the aim to make Dubai the first city fully powered by blockchain by 2020.[414] The strategy was based on three pillars of government efficiency, industry creation and international leadership.[415] To realise the Dubai

[411] http://www.bermudalaws.bm/laws/Consolidated%20Laws/Digital%20Asset%20Issuance%20Rules%202020.pdf.

[412] https://www.bma.bm/viewPDF/documents/2020-12-16-11-32-59-Statement-of-Principles-DAIA.pdf.

[413] https://newsroom.ibm.com/IBM-blockchain?item=30730.

[414] https://govchain.world/uae/.

[415] https://govchain.world/uae/.

Blockchain Strategy both IBM and ConsenSys (a large blockchain consulting business) worked with the Smart Dubai Office. The work on the Dubai Blockchain Strategy lead to Dubai launching the Dubai Blockchain platform, an enterprise-ready platform designed as "*a stepping stone for organisations in the UAE and globally to transition their blockchain testing and development into full production*."[416]

36. In March 2022, Dubai's Virtual Assets Regulatory Authority (VARA) was established. VARA is described as "*a mission-focused Regulator, to nurture and safely scale a rapidly decentralising business landscape founded on four cornerstone principles - secure cross-border interoperability, informed investor adoption, market protection prioritisation and responsible industry participation.*"[417] VARA has three primary roles: overseeing the issuing, trading and authorising of virtual assets in Dubai; regulating cryptocurrency exchanges and service providers; and monitoring transactions to ensure consumer protection.[418] Fittingly VARA intends to establish its headquarters in the Metaverse "*to enhance its accessibility in the crypto industry*".[419]

37. Not surprisingly, Dubai is now described as the hotbed for blockchain adoption, through both the city's leadership and the private sectors' drive.[420]

Hong Kong

38. Hong Kong has been described as the epicenter of cryptoasset due to its vibrant entrepreneurial spirit, one of the world's strongest finance system, and its proximity to China.[421] Some of the largest blockchain businesses began in Hong Kong.[422] Hong Kong's crown, however, is slipping with Singapore increasingly looking more attractive.[423] There are two reasons behind Hong Kong's loss of attractiveness for blockchain and cryptocurrency businesses. First, its perceived high regulatory requirements and second a lack of long-term regulatory guidance.[424] To provide more certainty, in January 2022 Hong Kong's Securities and Futures Commission ("SFC") and the Hong Kong Monetary Authority ("HKMA") issued a "Joint Circular on Intermediaries' Virtual Asset Related Activities".[425]

---

[416] https://coingeek.com/middle-east-blockchain-expansion-why-dubai-is-the-new-hotbed-for-blockchain-and-bitcoin/.

[417] https://mediaoffice.ae/en/news/2022/May/03-05/Dubai-Virtual-Assets-Regulatory-Authority-becomes-world-first#:~:text=VARA%2C%20established%20to%20provide%20a,continually%2Devolving%20products%20and%20underlying.

[418] https://crypto.com/company-news/crypto-com-receives-provisional-approval-from-dubai-virtual-assets-regulatory-authority.

[419] https://coincentral.com/dubais-vara-to-establish-worlds-first-metaverse-hq-in-the-sandbox/.

[420] https://coingeek.com/middle-east-blockchain-expansion-why-dubai-is-the-new-hotbed-for-blockchain-and-bitcoin/.

[421] https://www.coindesk.com/layer2/2022/02/17/china-casts-long-shadow-over-hong-kongs-once-vibrant-crypto-industry/.

[422] https://www.forbes.com/sites/zinnialee/2021/12/09/hong-kongs-unfriendly-crypto-rules-boost-rival-efforts-to-attract-bitcoin-billionaires/?sh=2d236ce51046.

[423] https://www.forbes.com/sites/zinnialee/2021/12/09/hong-kongs-unfriendly-crypto-rules-boost-rival-efforts-to-attract-bitcoin-billionaires/?sh=2d236ce51046.

[424] https://www.forbes.com/sites/zinnialee/2021/12/09/hong-kongs-unfriendly-crypto-rules-boost-rival-efforts-to-attract-bitcoin-billionaires/?sh=2d236ce51046.

[425] https://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2022/20220128e3.pdf.

Appendix Three: International agencies

Organisation for Economic Co-operation and Development (OECD)

"Taxing Virtual Currencies: An Overview of Tax Treatments and Emerging Tax Policy Issues"

1. In 2020, the OECD published a report analysing the approaches and policy gaps across the main types of tax (income, consumption and property taxes) with input from over five jurisdictions. The report considers the tax implication of emerging issues, including the growing interest in stablecoins, CBDCs, and the evolution of consensus mechanisms used to maintain blockchain networks and decentralised finance.[426]

2. The OECD's report includes considerations for policymakers wishing to strengthen their legal and regulatory frameworks for taxing virtual currencies, thus improving certainty for tax administrations and tax payers, including the following:[427]

    (a) Providing clear guidance and legislative frameworks for the tax treatment of 'crypto-assets' and virtual currencies and update these frequently, including to ensure consistency with the treatment of other assets, notably intangible assets, and to address major taxable events;

    (b) Supporting improved compliance, including through the consideration of simplified rules on valuation and on exemption thresholds for small and occasional trades;

    (c) Aligning the tax treatment of virtual currencies with other policy objectives or trends, including the declining use of cash – which is being accelerated by the COVID-19 pandemic – and environmental policy objectives; for instance, mining virtual currencies can prove energy-intensive; and

    (d) Designing appropriate guidance on the tax treatment of emerging technological areas, including stablecoins, central bank digital currencies, proof-of-stake consensus mechanisms and decentralised finance, for which existing tax treatments may not be appropriate.

Public consultation document – "*Crypto-Asset Reporting Framework and Amendments to the Common Reporting Standard*"

3. In 2022, the OECD released a draft framework that includes model technical rules to standardise how global tax authorities regulate and commentary for wide adoption and sharing of tax information related to 'crypto-assets'.[428]

4. The proposed framework is expected to require intermediaries (including 'crypto-asset' brokers, dealers, and exchange service providers) to collect CDD information on customers (e.g., including their names, addresses, jurisdictions of residence, and taxpayer identifications numbers). The intermediaries will then pass that information to the relevant authorities in the individual's country of residence. For users that are legal entities, intermediaries would also have to report each entity's controlling persons that reside within the jurisdiction. Customers are likely to be required to provide additional information when entering into transactions and to give details about their 'crypto-assets', including values and gains. Exceptions to these reporting and due diligence requirements would apply if an intermediary were subject to similar requirements in another jurisdiction.

---

[426] https://www.oecd.org/tax/tax-policy/taxing-virtual-currencies-an-overview-of-tax-treatments-and-emerging-tax-policy-issues.htm.

[427] https://www.oecd.org/tax/tax-policy/taxing-virtual-currencies-an-overview-of-tax-treatments-and-emerging-tax-policy-issues.pdf. See also a summary here https://www.oecd.org/tax/tax-policy/flyer-taxing-virtual-currencies-an-overview-of-tax-treatments-and-emerging-tax-policy-issues.pdf.

[428] https://www.oecd.org/tax/exchange-of-tax-information/public-consultation-document-crypto-asset-reporting-framework-and-amendments-to-the-common-reporting-standard.pdf.

5. Transactions including exchanges between 'crypto-assets' and fiat currencies, exchanges between different type of 'crypto-assets', certain retail payment transactions involving 'crypto-assets', and transfers of 'crypto-assets' would need to be reported. The basis of reporting these transactions is on an aggregate basis by type of 'crypto-asset' and type of transaction, and information would have to be provided regarding the fiat currency and/or fair market value (in fiat currency) of the 'crypto-assets' involved in these transactions.

Other guidance

6. More generally, OECD have also published various commentary and policy statements on the following:

   (a) Institutionalisation of 'crypto-assets' and DeFi-TradFi interconnectedness – see in particular chapter 4 "Policy considerations";[429]

   (b) Initial Coin Offerings (ICOs) for SME Financing – see "Policy and regulatory considerations" on page 40;[430] and

   (c) Commentary in relation to blockchain and distributed ledger technology.[431]

Financial Action Task Force (FATF)

Updated Guidance

7. On 28 October 2021, the Financial Action Task Force (**FATF**) issued an update for its 2019 Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers (**Updated Guidance**)[432] in relation to AML/CFT. This followed the FATF's Second 12-Month Review of the Revised FATF Standards on Virtual Assets and Virtual Asset Service Providers (**Virtual Assets Review**) released earlier on 5 July 2021.[433]

8. The Updated Guidance is intended to help countries and VASPs understand their AML/CFT obligations, and effectively implement the FATF's requirements as they apply to this sector.

9. According to the FATF's International Standards on Combating Money Laundering and the Financing of Terrorism and Proliferation (**FATF Recommendations**), a virtual asset is "*a digital representation of value that can be digitally traded, or transferred, and can be used for payment or investment purposes*", while a VASP is a person that, as a business, conducts one or more of a range of prescribed activities related to virtual assets.

10. The Updated Guidance substantially expands on the previous 2019 guidance. The revisions focus on six key areas, namely:

    (a) clarification of the definitions of virtual assets and VASPs;

    (b) guidance on how the FATF Recommendations apply to stablecoins and entities involved with them;

---

[429] https://www.oecd-ilibrary.org/docserver/5d9dddbe-en.pdf?expires=1655810978&id=id&accname=guest&checksum=3C07EDE62D7AF0F32A3A1D4875B9CE02.

[430] https://www.oecd.org/finance/ICOs-for-SME-Financing.pdf.

[431] https://www.oecd.org/finance/blockchain/.

[432] https://www.fatf-gafi.org/media/fatf/documents/recommendations/Updated-Guidance-VA-VASP.pdf.

[433] https://www.fatf-gafi.org/media/fatf/documents/recommendations/Second-12-Month-Review-Revised-FATF-Standards-Virtual-Assets-VASPS.pdf.

(c) additional guidance on the risks and tools available to countries to address the money laundering and terrorist financing (**ML/TF**) risks for peer-to-peer transactions;

(d) updated guidance on the licensing and registration of VASPs;

(e) additional guidance for the public and private sectors on the implementation of the "travel rule"; and

(f) principles of information-sharing and co-operation amongst VASP supervisors.

11. The Updated Guidance points out that the virtual asset and VASP definitions are intended to be expansive. The FATF expects jurisdictions to use the fundamental concepts to take a functional approach able to accommodate technological advancements and innovative business models.

12. Assets or services should be considered on the basis of their characteristics, not the technology they employ or the terminology used to describe them. For example, the Updated Guidance notes that:

(a) non-fungible tokens may, based on their nature, generally not be considered virtual assets, but their function or use in practice can change this;

(b) providers of ancillary infrastructure, or developers of software or hardware, would not generally be VASPs, unless the particular facts and circumstances actually trigger the definition; and

(c) digital currencies issued by central banks would, for the FATF's purposes, be categorised as fiat currency rather than virtual assets, and fall outside the scope of the Updated Guidance.

Others

Basel Committee on Banking Supervision

Consultative Document – *"Prudential Treatment of Cryptoasset Exposures"*

13. In June 2021, the Basel Committee issued a public consultation for the prudential treatment of banks' cryptoasset exposures.[434]

14. The proposals split cryptoassets into two broad groups:[435]

(a) Group 1 cryptoassets - these fulfil a set of classification conditions and as such are eligible for treatment under the existing Basel Framework (with some modifications and additional guidance). These include certain tokenised traditional assets and stablecoins; and

(b) Group 2 cryptoassets - are those, such as bitcoin, that do not fulfil the classification conditions. Since these pose additional and higher risks, they would be subject to a new conservative prudential treatment.

15. CBDCs were not within the scope of the consultation.

16. In May 2022, the Basel Committee progressed its work towards issuing a second consultation paper on the prudential treatment of banks' cryptoasset exposures, following its initial consultation last year. Recent developments have further highlighted the importance of having a global minimum prudential framework to mitigate risks from cryptoassets. Building on the feedback received by external

[434] https://www.bis.org/bcbs/publ/d519.pdf.

[435] https://www.bis.org/press/p210610.htm.

stakeholders, the Basel Committee plans to publish another consultation paper over the coming month, with a view to finalising the prudential treatment around the end of 2022.[436]

International Monetary Fund (IMF)

17. Despite what appears to be an anti-cryptocurrency stance by the International Monetary Fund (**IMF**),[437] it has published various commentary in relation to digital assets. These include IMF Blogs posts like the following:[438]

"Global Crypto Regulation Should be Comprehensive, Consistent, and Coordinated"[439]

18. The IMF considers that a global regulatory framework should provide a level playing field along the activity and risk spectrum, and as such, should have the following three elements:

    (a) Crypto asset service providers that deliver critical functions should be licensed or authorised. These would include storage, transfer, settlement, and custody of reserves and assets, among others, similar to existing rules for financial service providers. Licensing and authorisation criteria should be clearly articulated, the responsible authorities clearly designated, and coordination mechanisms among them well defined;

    (b) Requirements should be tailored to the main use cases of crypto assets and stablecoins. For example, services and products for investments should have requirements similar to those of securities brokers and dealers, overseen by the securities regulator. Services and products for payments should have requirements similar to those of bank deposits, overseen by the central bank or the payments oversight authority. Regardless of the initial authority for approving crypto services and products, all overseers—from central banks to securities and banking regulators—need to coordinate to address the various risks arising from different and changing uses; and.

    (c) Authorities should provide clear requirements on regulated financial institutions concerning their exposure to and engagement with crypto. For example, the appropriate banking, securities, insurance, and pension regulators should stipulate the capital and liquidity requirements and limits on exposure to different types of these assets, and require investor suitability and risk assessments. If the regulated entities provide custody services, requirements should be clarified to address the risks arising from those functions.

19. The IMF also considers there is an urgent need for cross-border collaboration and cooperation to address the technological, legal, regulatory, and supervisory challenges. Setting up a comprehensive, consistent, and coordinated regulatory approach to crypto is a daunting task. But if work is started now it would be possible to achieve the policy goal of maintaining financial stability while benefiting from the benefits of the underlying technological innovations.

---

[436] https://www.bis.org/press/p220531.htm.

[437] IMF discouraged the use of cryptocurrency as a condition of a loan to Argentina. The announcement came less than a year after Elsalvador's plan to use bitcoin as legal tender was met with complaints from IMF ahead of negotiations on a loan with the country. See https://www.coindesk.com/layer2/2022/03/18/why-is-the-imf-so-afraid-of-cryptocurrency/.

[438] https://blogs.imf.org/2021/12/09/global-crypto-regulation-should-be-comprehensive-consistent-and-coordinated/#:~:text=Global%20Crypto%20Regulation%20Should%20be%20Comprehensive%2C%20Consistent%2C%20and%20Coordinated,-IMFBlog2021%2D12&text=The%20IMF's%20mandate%20is%20to,are%20changing%20the%20system%20profoundly.&text=Crypto%20assets%20and%20associated%20products,grown%20rapidly%20in%20recent%20years.

[439] https://blogs.imf.org/2021/12/09/global-crypto-regulation-should-be-comprehensive-consistent-and-coordinated/.

"Fast-Moving FinTech Poses Challenge for Regulators"[440]

20. The IMF describes the following suggestions in relation to the need for stepped up regulation:

    (a) Policies that target both FinTech firms and traditional banks proportionately are needed. This way, the opportunities that FinTech offers are fostered, while risks are contained. For neobanks, this means stronger capital, liquidity, and risk-management requirements commensurate with their risks. For incumbent banks and other established entities, prudential supervision may need greater focus on the health of less technologically advanced banks, as their existing business models may be less sustainable over the long term; and

    (b) The absence of governing entities mean DeFi is a challenge for effective regulation and supervision. Regulation should focus on the entities that are accelerating the rapid growth of DeFi, such as stablecoin issuers and centralised crypto exchanges. Supervisory authorities should also encourage robust governance, including industry codes and self-regulatory organisations. These entities could provide an effective conduit for regulatory oversight.

"How Crypto and CBDCs Can Use Less Energy Than Existing Payment Systems" [441]

21. The IMF's cconclusions about energy efficiency in its blog post stem from a detailed look at how the new technologies effect how global consumers make purchases and send money. Crypto assets often rely on distributed ledgers for validating and recording transactions. In those cases, how much energy they use mainly depends on two factors:

    (a) How network participants agree on transaction histories. Some crypto assets like bitcoin use a proof-of-work consensus mechanism that needs substantial calculation power, and energy, to obtain the right to update the transaction trail. Other crypto assets use different approaches for their ledger updates that don't require as much computing strength; and.

    (b) Access to distributed-ledger systems. Some of these are permissionless, allowing anyone to join and validate transactions. Entry to others requires permission from a central authority, which offers greater control over key aspects of energy consumption such as the number of network participants, their geographic location, and software updates.

22. The IMF's study of crypto assetss' energy use relies on academic and industry estimates for different processing technologies.[442] The research shows that proof-of-work uses vastly more energy than credit cards. Replacing proof-of-work with other consensus mechanisms is a first green leap for crypto, and using permissioned systems is a second. Together, these advances put crypto's energy consumption well below that of credit cards.

World Economic Forum

23. The World Economic Forum (**WEF**) regularly publishes articles and educational examples, provides opportunities for people to participate at events, and provides opportunities for people to take action in relation to certain projects.

24. In particular, the WEF have a clear mission to help digital ledger technology to reach its full potential. The WEF state on its website:[443]

---

[440] https://blogs.imf.org/2022/04/13/fast-moving-fintech-poses-challenge-for-regulators/#.

[441] https://blogs.imf.org/2022/06/16/how-crypto-and-cbdcs-can-use-less-energy-than-existing-payment-systems/.

[442] https://www.imf.org/en/Publications/fintech-notes/Issues/2022/06/07/Digital-Currencies-and-Energy-Consumption-517866.

[443] https://www.weforum.org/topics/blockchain.

We aim to work with partners and members to guarantee that everyone, including the most marginalized members of society, can benefit from both blockchain and the cryptocurrencies that are potential gateways to new wealth creation.

25. The WEF has been considering how cryptocurrencies can become friendlier to people and the planet, which was an agenda item as part of the WEF Annual Meeting in May 2022.[444]

26. To shape the conversation on ESG (environmental, social and governance) matters in practical and actionable terms and demand signals from governments and companies, the WEF collaborated with CoinDesk to launch the "Crypto Impact and Sustainability Accelerator". [445] The accelerator aims shape a narrative that highlights how the crypto sector can lead in contributions to ESG by using use the following mechanisms to address current gaps:[446]

> ***(1) Projects:*** *"Deliver multi-stakeholder projects that develop open, collaborative mechanisms that could: create common standards in areas such as ESG metrics; ethnographic research, provide funding for accelerating existing initiatives and/or creating hackathons or development funding opportunities; and expand training and certification programs."*
>
> ***(2) Learning: "****Capture lessons from projects, drive peer-to-peer learning globally and across sectors, and amplify key insights, tools, and lessons so that relevant stakeholders can engage in ongoing iteration at scale in a multi-chain ecosystem."*
>
> ***(3) Leadership:*** *"Create impact opportunities for global leaders to seize, secure commitments to do so, and scale the impact of leading efforts. Elevate the importance of prioritizing social impact as a strategic driver of crypto."*

27. In July 2022 the WEF released its White Paper, "The Macroeconomic Impact of Cryptocurrency and Stablecoins".[447] It assessed four economic outcomes of different types of cryptocurrency regulation: the wait and see approach, ban cryptocurrencies, let cryptocurrencies play a regulated role in the economy or make cryptocurrency legal tender. As the White Paper found:[448]

"*[b]ased on projected macroeconomic outcomes, the majority of economists interviewed predict that allowing cryptocurrency to play a regulated role in the economy will bring the highest macroeconomic net benefit to society. This is contingent on the responsible design and enforcement of regulation*."[449]

Bank for International Settlements (BIS)

Supervising Cryptoassets for Anti-Money Laundering

28. In 2021, the Financial Stability Institute of the Bank for International Settlements (**BIS**) published a policy paper on "Supervising Cryptoassets for Anti-Money Laundering".[450]

29. For the BIS, the regulation (or otherwise) of cryptoassets is dependent on whether or not the asset is deemed to be within the regulatory perimeter in a particular jurisdiction and an assessment of the risks associated with the cryptoasset itself. Supervisory authorities consider a number of factors to

---

[444] https://www.weforum.org/agenda/2022/05/can-cryptocurrencies-become-environmentally-friendly/.

[445] https://www.weforum.org/communities/crypto-impact-and-sustainability-accelerator-cisa.

[446] https://initiatives.weforum.org/crypto-impact-and-sustainability-accelerator/about.

[447] https://www3.weforum.org/docs/WEF_The_Macroeconomic_Impact_of_Cryptocurrency_and_Stablecoins_2022.pdf.

[448] https://www3.weforum.org/docs/WEF_The_Macroeconomic_Impact_of_Cryptocurrency_and_Stablecoins_2022.pdf at page 8.

[449] https://www3.weforum.org/docs/WEF_The_Macroeconomic_Impact_of_Cryptocurrency_and_Stablecoins_2022.pdf at page 8.

[450] https://www.bis.org/fsi/publ/insights31.pdf.

understand the nature of and assess the risks posed by cryptoassets. These include, but are not limited, to the:[451]

(a) nature of the issuer (e.g., identifiable, non-identifiable; public, private; regulated, unregulated);

(b) intended use of the cryptoasset (e.g., used as a means of raising funds, of investment, of payment, granting rights to services/products in a company's network or ecosystem);

(c) holders' rights (e.g., claim to the delivery of an underlying asset, to a granted interest, to access or use a service in a network or platform);

(d) claim redemption (e.g., contractual claim, fixed redemption claim, dependent on price development);

(e) control over the ledger (e.g., open to the public, open to specific parties, closed to a limited number of authorised parties);

(f) validation of the ledger (e.g., permissioned, permissionless); and

(g) mechanism to transfer the cryptoasset's ownership (e.g., centralised, peer-to-peer, decentralised).

30. Aiming for a comprehensive view of all cryptoasset service provider services and actors involved, cryptoasset-related activities may be mapped to the life cycle of the cryptoasset itself, resulting in three categories by which cryptoasset-related activities may be classified:

(a) Primary market activities: relate to the issuance and distribution of assets (e.g., issuer and investor onboarding, deal structuring, risk assessment, asset registration, distribution of the asset to market participants);

(b) Secondary market activities: comprising trading (e.g., admission of the asset to trading, price discovery, order matching, asset transmission), clearing and settlement and servicing (e.g., asset management, custody); and

(c) Tangential activities: aimed at supporting and ensuring that primary and secondary market activities are conducted in an efficient manner (e.g., infrastructure services, ancillary services).

31. The BIS's policy paper is a call to action. Specifically, a call to action on three policy priorities:[452]

(1) *"**Defining the regulatory perimeter and detecting unlicensed activities:** there appears to be some confusion on the part of jurisdictions about which firms, activities and services should be captured by the regulatory perimeter under their existing regulations and minimum standards, particularly when novel instruments and operating models that do not conform to existing definitions are concerned. The cross-border nature of crypto-asset services further exacerbates this problem, as firms offering services in one jurisdiction may be located and legally domiciled elsewhere. Work under way at the FATF to address these questions may be helpful to mitigate uncertainties and close potential gaps in risk coverage. Consistent implementation of the FATF standards would also contribute to deterring unlicensed activity.*

[451] https://mena.thomsonreuters.com/en/resources/risk/articles/2021/supervising-crypto-assets-for-aml.html.

[452] https://mena.thomsonreuters.com/en/resources/risk/articles/2021/supervising-crypto-assets-for-aml.html.

(2) ***Implementing the travel rule:*** *despite it being a binding obligation under FATF, most jurisdictions have not implemented the travel rule. This is in part because many authorities consider there are no technological solutions that would allow a convenient and sustainable implementation. A few jurisdictions have implemented and enforced compliance with the travel rule for crypto-asset service providers, demonstrating that it is possible. Those that have implemented this requirement "could serve as an example to those that have yet to do so".*

(3) ***Understanding and mitigating risks posed by P2P transactions:*** *P2P transfers are a primary concern for numerous jurisdictions. This is because these transactions would typically not involve any entity subject to AML/CFT requirements. Therefore, understanding the risks posed and adopting mitigation measures for P2P transactions based on thoughtful risk assessment, or innovative applications of technology, may be needed."*