TRUSTING CRYPTOCURRENCIES: ASPECTS OF THE COMMON LAW AND EQUITY AFFECTING CRYPTOCURRENCY OWNERS

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Introduction

Cryptocurrencies[1] are digital assets that provide a new way to transfer value without the need for a traditional intermediary such as a bank. They have become increasingly prevalent globally since the introduction in 2009 of the first of their kind, Bitcoin.[2] Although, the concerns of cryptocurrencies have been widely publicised. They can be extremely volatile;[3] are often used by criminals;[4] and, hackers are increasingly stealing amounts that are worth millions of dollars.[5] However, an issue that is not as widely publicised, is how the uncertainty of the law applying to cryptocurrency may also impact their owners.

With an increasing number of cryptocurrency exchange[6] hacks where vast amounts of cryptocurrency have been stolen, cryptocurrency owners may wonder what their legal rights are. Governments worldwide have mostly refrained from introducing specific legislation to regulate cryptocurrencies.[7] This is true in New Zealand which has left cryptocurrency owners in New Zealand with much uncertainty about how existing laws will apply to them.[8]

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[1] This dissertation will refer to 'cryptocurrencies', however, they are also commonly known as 'cryptoassets' and 'virtual currencies' among other names.

[2] Over 7,000 cryptocurrencies are now in existence. See "Today's Cryptocurrency Prices by Market Cap" (26 September 2020) CoinMarketCap < https://coinmarketcap.com/>.

[3] David Yermack "Is Bitcoin a Real Currency? An Economic Appraisal" David KC Lee (ed) The Handbook of Digital Currency (Elsevier, 2015) 31 at 41.

[4] Alexandra Sims, Kanchana Kariyawasam and David Mayes *Regulating Cryptocurrencies in New Zealand* (The Law Foundation New Zealand, September 2018) at 36.

[5] "The 2020 State of Crypto Crime" (January 2020) Chainanalysis <https://blog.chainalysis.com/> at 41.

[6] A cryptocurrency exchange is an online marketplace that allows users to buy and sell different cryptocurrencies.

[7] Stéphane Blemus "Law and Blockchain: A Legal Perspective on Current Regulatory Trends Worldwide" (2017) 4 RTDF 1 at 15.

[8] Sims, Kariyawasam and Mayes, above n 4, at 122.

There have been questions about how traditional laws will apply due to practical difficulties of enforcing them on cryptocurrencies.[9] But, the decision in *Ruscoe v Cryptopia Limited (in liquidation)* shows the courts are willing to apply established legal principles to cryptocurrencies.[10] The practical difficulties in enforcing the law does not exclude cryptocurrencies from the law.[11] Since, it is not in New Zealand's interests to ban cryptocurrencies,[12] the question will be how the common law and equity applies.

Decreasing the legal uncertainty surrounding cryptocurrencies will help to prevent their growth being curtailed.[13] This dissertation will explore how certain aspects of the common law and equity may apply to cryptocurrencies following a cryptocurrency exchange hack. The reasons why there is so much legal uncertainty in this field will be laid out. However, this dissertation does not aim to give a comprehensive analysis of all the legal issues that could arise from a cryptocurrency exchange insolvency. A legal issue that will often arise with cryptocurrency is that parties are located in different jurisdictions.[14] However, this dissertation will proceed on the assumption that all parties are subject to the law in New Zealand.

In the first chapter, the complex nature of cryptocurrencies is laid out. This is to show that the law is dealing with a type of technology that is paradigmatically different to what the law has dealt with previously. There is no law in New Zealand currently that deals specifically with cryptocurrencies; but, entities that deal with them are regulated. This is reflective of the governments worldwide struggling to decide how to regulate them. However, the judgment of *Ruscoe v Cryptopia* has provided some valuable guidance of how cryptocurrencies will be treated in New Zealand. Although, the judgment in *Ruscoe v*

[9] Lawrence Akka and others *Legal Statement on Cryptoassets and Smart Contracts* (The LawTech Delivery Panel, November 2019) at 12.

[10] *Ruscoe v Cryptopia Limited (in liquidation)* [2020] NZHC 728.

[11] Akka, above n 9, at 12.

[12] Sims, Kariyawasam and Mayes, above n 4 at 126.

[13] Miriam Rozen "Tales from the crypt; lawyers on the cutting-edge of cryptocurrency law gamble on area's murky future" (2017) 39 American Lawyer 78 at 78.

[14] Andrew Dickinson "Cryptocurrencies and the Conflict of Laws" in David Fox and Sarah Green (eds) *Cryptocurrencies in Public and Private Law* (1st ed, Oxford University Press, New York, 2019) 93 at 96.

Cryptopia is likely to only have touched on some of the legal uncertainty that cryptocurrency owners in New Zealand face.

In the second chapter, the possibility of cryptocurrency exchanges holding cryptocurrency on trust for their users is explored. It is evident that the current rules of express trusts will apply adequately to cryptocurrencies. Analogies can be made to traditional cases dealing with traditional funds. However, there is still uncertainty for cryptocurrency owners. This is partly due to cryptocurrency exchanges not yet clearly establishing how they hold cryptocurrencies for their users. However, it is compounded by the unsettled principles surrounding certainty of subject matter. After the Trusts Act 2019 comes into effect, the next court dealing with the issue may be obliged to clarify this.

The third and fourth chapters consider the uncertainty for owners who have had their cryptocurrency stolen. The *nemo dat quod non habet* principle should apply if cryptocurrencies are continued to be viewed as property. This may put victims of cryptocurrency theft in a position to expand the tort of conversion in New Zealand. Although, if cryptocurrency is classified as money, then innocent purchasers could take legal title to stolen cryptocurrency. While this is unlikely, the technical theoretical debate further evidences that cryptocurrencies legal status in New Zealand is far from certain. This may only be resolved from test cases if Parliament does not want to regulate.

Chapter 1: Background

What are cryptocurrencies?[15]

Defining cryptocurrencies is a difficult task because each one can function slightly differently.[16] A useful, albeit non-authoritative, description of the broad features that are indicative of a cryptocurrency is provided by the 'UK Jurisdiction Taskforce':[17]

> "Although not all systems possess all of them, we can therefore identify the principal novel and characteristic features of cryptoassets as being:
> (a) intangibility;
> (b) cryptographic authentication;
> (c) use of a distributed transaction ledger;
> (d) decentralisation; and
> (e) ruled by consensus."

This first feature of intangibility describes how every cryptocurrency does not have a physical presence. They exist entirely in the digital world. Cryptographic authentication refers to how transactions are initiated and confirmed through the use of cryptography.[18] Distributed Ledger Technology (DLT) is a method of recording the data of transactions

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[15] For further explanations of how cryptocurrencies work, see generally Sims, Kariyawasam and Mayes, above n 4; Joseph W. Guzzetta, "How bitcoin works-A technological description of blockchain-based cryptocurrencies for nontechnical lawyers" (2018) 35 Computer and Internet Lawyer 21; and Marc Pilkington "Blockchain Technology: Principles and Applications" in Xavier Olleros and Majilinda Zhegu (eds) *Research Handbook on Digital Transformations* (Edward Elgar, Cheltenham, 2016) 225 at 225.

[16] Julie Cassidy and others *A toss of a (bit)coin: the uncertain nature of the legal status of cryptocurrencies* (2020) 17 eJournal of Tax Research 168.

[17] The UK Jurisdiction Taskforce released a statement providing the views of several expert barristers on how the English common law applied to cryptoassets and smart contracts. See Akka, above n 9, at 10.

[18] Cryptography uses mathematical theory and computer science to create a method that converts plain text into a form that can only be deciphered by the intended recipient. This prevents third-parties from reading or altering information. See generally Shobhit Seth "*Explaining the Crypto in Cryptocurrency*" (25th January 2020) Investopedia < www.investopedia.com/tech/explaining-crypto-cryptocurrency/>

across a network of computers at the same time.[19] This process does not require a central authority, such as a bank, to ensure the integrity of the system. Instead, cryptocurrency transfers are directly between the two participating parties. Additionally, there is no central ledger recording balances, instead, any computer with a copy of the software has access to the full ledger. The ledger is public which is why DLT is considered to be a decentralised system. This decentralized system is ruled by consensus, meaning that the ledger reflects what the majority of the computers on that system agree is correct.[20] The consensus mechanism prevents the double spending of cryptocurrency.[21]

The description formulated above is intentionally imprecise. This is in recognition of the fact that features of different cryptocurrencies can vary greatly and are likely to change with the development of the technology.[22] So, while this description is useful in outlining the broad category of cryptocurrencies, it does not help in showing what a current cryptocurrency looks like in operation. For the purposes of this dissertation, Bitcoin will be focused on. However, most cryptocurrencies built upon the blockchain will operate similarly and therefore the legal analysis should equally apply.[23] Therefore, from herein a reference to 'cryptocurrency' will mean a cryptocurrency similar to Bitcoin.

Bitcoin

Cryptocurrency's such as Bitcoin are often described as being something analogous to a 'coin'. This does not accurately portray how they operate, although the analogy is useful to broadly conceptualise the technology.[24]

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[19] Sims, Kariyawasam and Mayes, above n 4 at 12.

[20] At 40.

[21] Double spending is where a purchaser wrongly uses the same coin for two different transactions. See Sims, Kariyawasam and Mayes, above n 4 at 55.

[22] Akka, above n 9, at 10.

[23] Guzzetta, above n 15, at 21.

[24] Janis Sarra and Louise Gullifer "Crypto-claimants and bitcoin bankruptcy: Challenges for recognition and realization" (2019) 28 I.I.I.R. 233 at 237.

The Bitcoin system uses Blockchain which is a specific type of DLT.[25] It is used to conduct transactions and 'store' the 'crypto-coins' securely.[26] A Blockchain is a database of the full history of transactions that have occurred within the system.[27] Every time a Bitcoin has been 'spent', this is available to see on the Blockchain. This database of transactions, commonly called a 'public ledger', is available for any participant to download and view.[28] A computer that has this software downloaded[29] will synchronise with the latest transactions.[30] This means that for anyone to change the information on the Blockchain, every computer would have to agree.[31]

Each Bitcoin is allocated to a 'public key' and a 'private key'.[32] Both of these keys are in fact just strings of alphanumeric characters.[33] A public key can be thought of as your 'address' which is shared with others in order for them to send you Bitcoin. A private key, however, is not to be shared with others. The private key is used to initiate and verify transactions associated with its public key. Access to the private key, therefore, allows control of the crypto-coins associated with the corresponding public key.

To participate in the Bitcoin system, all you need is a 'public key' and a 'private key'. There is no requirement for any identification of an individual beyond this, meaning that anonymity is easily achieved.

When a Bitcoin is transferred, the private key is used to give a 'signature' on the transaction. The network authenticates the transaction by checking the signature used is correct and there are sufficient Bitcoin available at the address. Once the verification is done, the ledger is updated to record this transaction on the whole network. Each

[25] Sims, Kariyawasam and Mayes, above n 4 at 48.
[26] At 54.
[27] At 21.
[28] At 21.
[29] Computers that hold the Bitcoin blockchain are commonly referred to as 'nodes'.
[30] Sims, Kariyawasam and Mayes, above n 4 at 21.
[31] At 21.
[32] Pilkington, above n 15, at 226.
[33] Sims, Kariyawasam and Mayes, above n 4 at 143.

transaction is called a 'block' and a 'block' is only added to the database once the transaction is verified through a consensus of the network. These 'blocks' recorded on the blockchain are practically immutable once they have been added.[34]

It is important to note that a 'Bitcoin' is only an ideational construct.[35] There is not actually a 'Bitcoin' balance on the system, but only records of transactions. A Bitcoin only exists in the sense that the record of transactions will show whether you have more inputs than outputs. Notably, the transaction output is a different sequence of characters to its input.[36] Therefore, the intrinsic nature of Bitcoin is informational, rather than monetary or economic.[37]

How are public and private keys stored?

As discussed already, cryptocurrencies themselves are 'stored' across a network of computers that have a record of the blockchain. However, 'private keys' are not publicly recorded this way. An owner of a cryptocurrency needs to know their 'private key' to be able to make a transaction with their cryptocurrency. So this is kept secret along with their 'public key' so an owner can exclusively control the transferal of their cryptocurrency. Public and private keys can be stored in several ways since they are just strings of alphanumeric characters. [38] However, these keys are usually stored in a 'digital wallet'.[39]

A cryptocurrency 'digital wallet' will be associated with one or more 'public keys'. The 'digital wallet' holds the public and private keys in secret for the owner. It is effectively a software program that records how much cryptocurrency is stored at the associated 'public

[34] Sims, Kariyawasam and Mayes, above n 4 at 21.
[35] David Fox "Cryptocurrencies in the Common Law of Property" in Sarah Green (ed) *Cryptocurrencies in Public and Private Law* (1st ed, Oxford University Press, New York, 2019) 139 at 158.
[36] At 143.
[37] Pilkington, above n 15, at 228.
[38] Sarra and Gullifer, above n 24, at 238.
[39] Christopher Hare "Cryptocurrencies and Banking Law: Are There Lessons to Learn?" in David Fox and Sarah Green (eds) *Cryptocurrencies in Public and Private Law* (1st ed, Oxford University Press, New York, 2019) 229 at 233.

keys' and facilitates cryptocurrency being transferred and received by using the 'private keys'.[40] So, it is important to remember that these 'digital wallets' only hold the keys and not the cryptocurrency itself which is recorded on the blockchain ledger. These keys just facilitate transferring the cryptocurrency.[41]

If someone does not want to acquire a 'digital wallet' themselves, they can entrust a third party 'wallet-provider' do this on their behalf. This method is used commonly by people who favour ease of accessibility because users can store, transfer and receive cryptocurrencies with only a need for internet access.[42] The 'wallet-provider' provides a user with an account reflecting how much cryptocurrency they own.[43] The wallet-provider will execute transactions with the cryptocurrency as instructed by the owner.

This method of storage will be the focus of this dissertation and will be referred to as a 'wallet-provider'. However, cryptocurrency exchanges are often main providers of this 'wallet-provider' service. During this dissertation, when reference is made to cryptocurrency being stored with a cryptocurrency exchange, this is through their wallet-provider function.

Current legal status in New Zealand

Cryptocurrencies are largely unregulated in New Zealand. While there has been no legislation introduced to directly deal with cryptocurrencies themselves, some existing laws have captured the entities that deal with them. [44] Regulators have issued guidance which has confirmed that cryptocurrency exchanges and wallet-providers are regulated in New Zealand.

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[40] *United States v Ulbricht*, 858 F 3d 71 (2d Cir, 2018) at 85.

[41] Hare, above n 39, at 233.

[42] At 234.

[43] Sarra and Gullifer, above n 24, at 240.

[44] Sims, Kariyawasam and Mayes, above n 4 at 79.

In 2017, the Financial Markets Authority (FMA) released a media announcement giving guidance for businesses providing cryptocurrency services.[45] This outlined that exchanges and wallet-providers provide a "financial service" related to cryptocurrencies. Therefore, they are regulated by the "fair dealing" requirements in the Financial Markets Conduct Act 2013. They must also register with the Financial Service Providers Register if they are located in New Zealand. If they have retail clients then they are required to belong to a dispute resolution scheme in line with the Financial Service Providers (Registration and Dispute Resolution) Act 2008.[46]

New Zealand's current approach of only regulating the entities that deal with cryptocurrencies is common worldwide. Regulatory focus worldwide has largely been on cryptocurrency exchanges because no single entity controls a cryptocurrency system.[47] However, notably for the discussion below, there are no regulations about how a cryptocurrency exchange or wallet-provider should store your cryptocurrency.

Ruscoe v Cryptopia

The High Court in *Ruscoe v Cryptopia* considered the legal status of cryptocurrencies in New Zealand. This was thought to be the first time a court had done so in New Zealand.[48] This was done in the context of a dispute as to how liquidators should distribute the assets of an insolvent company, Cryptopia.

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[45] Financial Markets Authority "FMA commentary on ICOs and cryptocurrencies" (media release MR No. 2017 – 46, 2017)

[46] See "Cryptocurrency / Cryptoasset services" (2 March 2020) Financial Markets Authority <www.fma.govt.nz/compliance/cryptocurrencies/>. Cryptocurrency exchanges and wallet holders must also comply with The Anti-Money Laundering and Countering Financing of Terrorism Act 2009.

[47] Gavin Smith and others, "Blockchain Reaction" (14 May 2020) Allens <www.allens.com.au/globalassets/pdfs/specials/blockchainreport.pdf > at 13.

[48] *Ruscoe v Cryptopia*, above n 10, at [14].

Cryptpoia was a cyptocurrency exchange and a 'wallet-provider'.[49] It held large amounts of cryptocurrency on behalf of its users (account holders). In January 2019, Cryptopia was victim to a hack where it is thought that between nine and fourteen percent of its cryptocurrency was stolen, valued at NZD $30 million.[50] The hack made an irreversible unauthorised transfer of the cryptocurrencies to an undisclosed external exchange.[51] The hack used the private keys for the cryptocurrencies. Following the hack, Cryptopia briefly resumed operations before the company was placed into liquidation in May 2019.[52]

The liquidators of Cryptopia applied for directions on several issues from the court. This included the legal status of cryptocurrencies in New Zealand and whether the cryptocurrencies were held on trust by Cryptopia for individual Cryptopia account holders.[53]

The determination of these aforementioned issues would impact how the cryptocurrencies were treated in the liquidation. If the cryptocurrencies were deemed to be property held by Cryptopia on trust for individual account holders, then they would be distributed accordingly to those individuals.[54] However, if the cryptocurrencies were not held on trust for individual account holders, then they would be subject to even distribution between all unsecured creditors.[55]

Gendall J held that cryptocurrencies were property for the purposes of the Companies Act 1993.[56] However, it was strongly suggested that they also meet the common law definition of property.[57] An extension of this finding was that they were capable of being the subject

[49] At [22].
[50] At [12].
[51] At [13].
[52] At [12].
[53] At [46].
[54] At [55].
[55] At [54].
[56] At [133].
[57] At [120].

matter of a trust.[58] Gendall J also held that Cryptopia held cryptocurrencies on trust for the accountholders.[59]

This decision is an example of the New Zealand courts applying traditional common law and equity to a new technology. It is noteworthy that cryptocurrencies fell outside the traditional categories of 'chose in action' and 'chose in possession'. However, Gendall J did not see this as preventing a finding that they were property.[60] Recognising a new species of intangible property is an example of how traditional common law will have to deal with this new technology in the absence of Parliamentary intervention.

However, this decision will likely only be the beginning of cryptocurrency litigation. Cryptocurrency exchanges hacks are increasing each year.[61] When these hacks lead to a liquidation of the cryptocurrency exchange, the users of the exchange will need to be aware of the legal nature of their relationship. The decision in *Ruscoe v Cryptopia* will be welcomed as authority that cryptocurrencies may be held on trust. However, a trust relationship will always be highly fact dependent.[62] *Ruscoe v Cryptopia* provided some guidance on when a court will deem a trust to exist, but still left a lot unanswered.

[58] At [133].

[59] At [187].

[60] At [124].

[61] "The 2020 State of Crypto Crime", above n 5, at 41.

[62] Andrew S Butler "Creation of an Express Trust" in *Equity and Trusts in New Zealand* (2nd ed, Thomson Reuters, Wellington, 2009) 69 at 75.

Chapter 2: Cryptocurrency Exchanges and Express Trusts

Importance of the legal relationship

There has been an ever increasing amount of exchanges and wallet-providers that have been hacked each year.[63] In 2019, twelve exchanges were hacked with nearly $300 million worth of cryptocurrency stolen.[64] As a consequence of these thefts, there has been a rise in insolvencies of exchanges that provide this service of storing cryptocurrency. An important question for those who store their cryptocurrencies through these insolvent exchanges will be what claim they have in a liquidation. This claim will likely be determined by what relationship a cryptocurrency owner has with the wallet-provider.

If a trust relationship exists, cryptocurrency owners will likely have a proprietary claim that will take priority over unsecured creditors. Therefore, users could be at a significant advantage if they can establish a trust relationship with their wallet-provider.[65] Although, this depends on the cryptocurrency being held on trust remaining in the exchanges control. If the specific cryptocurrency held on trust is stolen, then a user would be left with no claim in the liquidation.[66]

However, it is also possible that the relationship is merely contractual.[67] In this case, the cryptocurrencies will then likely be considered assets of the company and these will be distributed rateably between all unsecured creditors.[68] However, the situation differs if

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[63] "The 2020 State of Crypto Crime", above n 5, at 41.

[64] "Most Significant Hacks of 2019 — New Record of Twelve in One Year" (5 January 2020) Cointelegraph <https://cointelegraph.com/news/most-significant-hacks-of-2019-new-record-of-twelve-in-one-year>.

[65] Akka, above n 9, at 11.

[66] However, the user may have a claim against the trustee for a breach of trust. See Kelvin F. K. Low, and Ernie Teo 'Legal risks of owning cryptocurrencies' in David Lee Kuo Chuen and Robert Deng (eds) *Handbook of Blockchain, Digital Finance and Financial Inclusion* (1st ed, Academic Press, London,, 2017) 225.

[67] Hare, above n 39, at 239.

[68] Companies Act 1993, s 313

cryptocurrency is deposited with a cryptocurrency exchange resulting in a contractual obligation to repay the user. In this situation, users do not face the risk of their specific cryptocurrency being stolen. This is because the cryptocurrency exchange's obligation still exists, meaning they will only be at risk if the cryptocurrency exchange was insolvent and could not meet this obligation.[69] The distinction between a trust relationship and contractual relationship is therefore crucial.

When will an express trust exist?

Research has shown that many wallet-providers do not specifically state what legal relationship they have with their users in relation to how they hold their cryptocurrency.[70] This was the case in *Ruscoe v Cryptopia* where the court decided on the facts that an express trust existed. The existence of any trust relationship will depend on the particular facts.[71] However, the uncertainty of principles surrounding express trusts will be of concern to users of cryptocurrency exchanges. While there can be satisfactory analogy to traditional case law that can provide guidance, some trust principles need to be clarified.

Proceeding on the basis that cryptocurrencies are a form of intangible property and capable of being trust property,[72] the application of existing trust principles to wallet-providers will be examined.

The Trust relationship

A trust is a fiduciary relationship in which property is vested in someone who has an obligation to hold it for the benefit of another person.[73] This relationship arises out of equity

[69] Low and Teo, above n 66.

[70] Sarra and Gullifer, above n 24, at 259.

[71] Butler, above n 62, at 75.

[72] *Ruscoe v Cryptopia*, above n 10, at [141].

[73] Jamie Glister and James Lee, *Modern Equity* (21st ed, Thomson Reuters, London, 2018), at 39; Trusts Act 2019, s 13.

and may be over any kind of property, including cryptocurrency.[74] For a valid express trust to exist, a person must clearly fulfil the requirements developed in equity that are now restated in the Trusts Act 2019.[75] Three certainties are required, namely the certainty of intention; certainty of subject matter; and, certainty of objects.[76]

The certainty of object is likely to be the least contentious of the three certainties with respect to cryptocurrency exchanges. For this requirement, the must be certainty as to who the beneficiaries of the trust property are.[77] A possible concern could be that owners of accounts at an exchange may be anonymous. However, this concern was addressed in *Ruscoe v Cryptopia*. When the identities of account holders are not found due to the anonymity of the platform, this will not invalidate the trust because it is only evidential uncertainty.[78] The maintenance of a database showing the amount of cryptocurrency each user owned was enough to provide certainty of object.[79] So, if cryptocurrency exchanges are keeping a record of how many Bitcoin account holders have, this should suffice despite not knowing the identity of the person behind that account.

Certainty of intention

A more contentious issue will be whether the parties intended a trust relationship to arise. For a valid trust, there must be certainty this type of relationship was intended. This requires an objective intention which can be evidenced by the relevant documentation and surrounding circumstances.[80] Notably, the use of the word "trust" is not required.[81] So, agreements with wallet-providers may constitute a trust relationship even if they are not labelled so.

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[74] *Ruscoe v Cryptopia*, above n 10, at [69].
[75] *Knight v Knight* (1840) 49 ER 58 at 68; Trusts Act 2019, s 15.
[76] Butler, above n 62, at 73.
[77] Amy Farr (ed) *Working with trusts* (online looseleaf ed, Thomson Reuters) at [1.3.01].
[78] *Ruscoe v Cryptopia*, above n 10, at [149].
[79] At [148].
[80] *Re Reynolds; Official Assignee v Wilson* [2008] NZCA 122 at [43].
[81] At [44].

For wallet-providers, a critical factor will be whether they had intended to take the cryptocurrency and only provide a personal obligation to later repay or restore the cryptocurrency. There are specific factors that will be of particular relevance in deciding this. These are shown in *Ruscoe v Cryptopia* and *Quoine Pte Ltd v B2C2 Ltd*,[82] but also in traditional cases dealing with funds. However, discerning the overall intention to create a trust can be a difficult task that will ultimately come down to the specific facts.[83]

Documentation

How the relationship is documented will be considered in determining certainty of intention. In *Ruscoe v Cryptopia*, Cryptopia had explicit reference to the cryptocurrency being held on trust.[84] Cryptopia referred to customers owning the cryptocurrency through using "your coin balances" throughout its website and marketing.[85] This was inconsistent with a mere contract under which they would be unsecured creditors.[86] So, this was a significant factor in inferring an intention the cryptocurrency was to be held on trust.

An issue highlighted in both *Ruscoe v Cryptopia* and *Quoine Pte Ltd v B2C2 Ltd* is the relevance of a change in terms and conditions. In *B2C2 Ltd v Quoine*, the Singapore High Court acknowledged that Quoine did not change how it operated after a 'Risk Disclosure Statement' was uploaded stating that cryptocurrency would not be returned to customers in the event of an insolvency.[87] Emphasis was given to the conduct of Quoine instead.[88] However, in the Singapore Supreme Court, the Risk Disclosure Statement was an important factor in determining that a trust did not exist. Assets held on trust are not generally subject

[82] *Quoine Pte Ltd v B2C2 Ltd* [2020] SGCA(I) 2
[83] Butler, above n 62, at 75.
[84] *Ruscoe v Cryptopia*, above n 10, at [27].
[85] At [172].
[86] At [172].
[87] *B2C2 Ltd v Quoine Pte Ltd* [2019] SGHC(I) 3 at [145].
[88] At [145].

to insolvency so this was wholly inconsistent with the existence of a trust.[89] This indicates that the terms of the agreement have the ability to negate the existence of a trust where the term is wholly inconsistent with a trust relationship.

The existence of terms stating a trust exists will not be enough to create a trust. In *Ruscoe v Cryptopia*, Cryptopia introduced a set of new terms and conditions that referred to cryptocurrencies as belonging to customers, as well as specifically stating the cryptocurrency was held on trust.[90] However, these terms and conditions did not change how Cryptopia operated.[91] So, notably the court held that the trusts existed without having to rely specifically on these terms and conditions.[92]

This suggests that changing the documentation of your relationship has the ability to negate the existence of a trust. However, it will not create a trust without being coupled by the underlying operations reflecting this, too.

Segregation

The intention to create a trust can be also shown through the conduct of the trustee.[93] It is an indication that a trust was intended if an alleged trustee segregates trust property from their own.[94] However, an intention against a trust will not be inferred solely based on the mixture of property.[95] The conduct of wallet-providers in how they store cryptocurrency will therefore be a relevant consideration. There is useful guidance on this segregation issue from two traditional cases involving money.

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[89] *Quoine Pte Ltd v B2C2 Ltd*, above n 82, at [148].
[90] *Ruscoe v Cryptopia*, above n 10, at [25].
[91] At [29].
[92] At [155].
[93] *Re Kayford (In Liquidation)* [1975] 1 W.L.R. 279 at 282.
[94] *R v Clowes* [1994] 2 All ER 316 at 325.
[95] At 325.

In *Re Kayford (In Liquidation)*, a mail order company received payments in advance from customers.[96] The mail order company opened a separate bank account to store this money. It was clearly labelled "Customers' trust deposit account" because the company had contemplated its own insolvency and wanted to protect its customers.[97] These funds were determined to be held on trust for the customers and not subject to distribution to the company's creditors.[98]

There was a clear intention for the funds to be held on trust because the company had labelled the funds and stored them separately.[99] This is significant as the payments could have been considered a debt. These actions were enough to show that the payments were not to be treated similarly to previous payments which only constituted debts. The segregation of funds can therefore be critical for inferring a trust. This would likely be similar with wallet-providers. If they store customers' cryptocurrency separately, this will be influential in inferring a trust was intended.

Contrasting the outcome in *Re Kayford*, is another English case, *Azam v Iqbal*.[100] While non-binding on New Zealand courts, this case is useful to show when conduct will be used to infer a creditor-debtor relationship.

In this case, funds had been advanced from customers to the operator of a money transfer system. Since the operator was not a bank, the relationship could not strictly be one of bank-customer.[101] However, the court found that the relationship was far more analogous to that of a bank-customer than one of a trust.[102] This was in reliance on the statement in *Foley v Hill* that:[103]

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[96] *Re Kayford (In Liquidation)*, above n 93

[97] At 280.

[98] At 282.

[99] At 282.

[100] *Azam v Iqbal* [2007] EWHC 2025 (Admin)

[101] *Azam v Iqbal*, above n 100, at [29].

[102] At [29].

[103] See *Foley v Hill* (1848) 2 HL 28 at 35 as cited in *Azam v Iqbal*, above n 100, at [22].

> "Money, when paid into a bank, ceases altogether to be the money of the principal . . .; it is then the money of the banker, who is bound to return an equivalent by paying a similar sum to that deposited with him when he has asked for it."

The operator had taken title to the customers' money subject only to a contractual obligation to pay back an equivalent amount in another currency. In forming this decision, it was influential that the operator mixed these funds with his own; was able to use the funds for his own purposes; and, only had an obligation to provide customers with a sum of foreign currency.[104] The court recognised that, similar to a bank, the operator in *Azam v Iqbal* was merely a debtor.

The difference between the two outcomes in *Re Kayford* and *Azam v Iqbal* reflects a key consideration when determining certainty of intention. If the funds are segregated, this supports an intention that they are held solely for a beneficiary. However, if the funds are mixed, this is often combined with the alleged trustee making use of the funds. A trustee using funds for their own purposes is wholly inconsistent with the existence of a trust. It is more analogous to a creditor-debtor relationship where there is only a contractual obligation to repay a certain amount. This distinction is important in relation to cryptocurrency exchanges, as evidenced by the difference in *Ruscoe v Cryptopia* and *Quoine Pte Ltd v B2C2 Ltd*.

In *Ruscoe v Cryptopia*, Cryptopia had its own cryptocurrency mixed with accountholders.[105] However, the court thought that this did not negate the existence of a trust. This was because Cryptopia did not trade in the cryptocurrencies apart from when it was also a beneficiary of the relevant trust.[106] Therefore, it was not asserting ownership over the account holders' cryptocurrency for their own purposes.

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[104] *Azam v Iqbal*, above n 100, at [16].

[105] *Ruscoe v Cryptopia*, above n 10, at [146].

[106] At [154].

This evidences that the key concern is actually whether the alleged trustee is asserting ownership of the property for themselves. Here, even though the cryptocurrency was mixed, it was still evident that Cryptopia was not asserting ownership for themselves because they were not trading in the cryptocurrency. So, while segregation may normally be an indicator, there still needs to be further factual inquiry into whether any conduct shows the alleged trustee is asserting ownership of the property. This consideration is highlighted by the appeal of *B2C2 Ltd v Quoine Pte Ltd*.

Quoine was a cryptocurrency exchange that allowed users to buy, sell and store cryptocurrencies. However, in the Singaporean Court of Appeal, Quoine was held to only have a contractual relationship with its users, not one of trust.[107] In determining whether a trust relationship will exist, it is helpful to understand the factors that caused the different outcomes in *B2C2 v Quoine* and *Ruscoe v Cryptopia*.

In addition to being a cryptocurrency exchange, Quoine actively traded cryptocurrencies itself as a 'market maker'.[108] Quoine used an automated trading system, which in this case had executed a trade with B2C2 at a price approximately 250 times higher than the current market rate. Quoine later recognised this mistake and reversed the trade. One of the claims B2C2 brought against Quoine was that the reversal of the trade was a breach of trust.[109]

In the Singapore High Court, Quoine, was held to have intended to hold cryptocoins on trust for its members.[110] In deciding that an intention existed, the court considered the conduct of the parties, any relevant document, and the surrounding circumstances.[111] The decisive factor indicating an intention for the Singapore High Court, was that Quoine held cryptocurrency separately from its own trading assets.[112] The separation was seen as an indication that Quoine did not claim title to the cryptocurrency and was holding it for B2C2.

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[107] *B2C2 Ltd v Quoine Pte Ltd*, above n 87, at [149].
[108] At [18].
[109] At [133]
[110] At [145].
[111] At [144]-[145].
[112] At [145].

However, this was overruled in the Singapore Court of Appeal. The Court of Appeal held that the segregation of cryptocurrency could not wholly justify inferring an intention to create a trust.[113] It could only be evidence pointing towards an intention. This decision was also in part due to Quoine not in fact keeping customers cryptocurrency separate. This was because the amount reflected in their balance with Quoine did not necessarily match what Quoine kept in storage.[114] Quoine would source cryptocurrency externally if they did not have enough to match customer balances. Along with this, Quoine used these pooled cryptocurrencies in its own activities as a market maker.[115] The way that Quoine operated was therefore seen to be similar to a bank where all that is owed is a debt.[116]

Segregation conclusion

Segregation may indicate the property is being held for the benefit of another person. But, this should be considered alongside the actual use of the property. This is because it is evident that the underlying concern in both traditional fund cases and cryptocurrency cases will be whether the alleged trustee is asserting ownership of the property for their own purposes. A trust relationship vests property in a trustee who has an obligation to hold it for the benefit of another person.[117] Using the property for the trustee's own purposes conflicts with this fundamental nature of a trust.

There is unlikely to be any difficulty analogising traditional cases dealing with certainty of intention to the context of cryptocurrency exchanges. This is likely because the inquiry into intention is not directly impacted from having a new technology as the subject matter. Although, while these authorities are relevant, the determination of certainty of intention is still highly fact dependent as shown with the different outcomes in *Ruscoe v Cryptopia*

[113] *Quoine Pte Ltd v B2C2 Ltd*, above n 82, at 145.
[114] At [147].
[115] At [146].
[116] At [147].
[117] Glister and Lee, above n 73, at 39.

and *B2C2 Ltd v Quoine Pte Ltd*. How courts interpret the principles relating to certainty of subject matter will likely be of more interest since the decision in *Ruscoe v Cryptopia* did not clarify the conflicting case law.

Certainty of subject matter

If an express trust is to arise, it must be sufficiently certain what cryptocurrency is held by the trust. The cryptocurrency must be identifiable and there must be clarity over what beneficial entitlement each accountholder has.[118] Certainty of subject matter is important in the event a trustee becomes insolvent as it determines what cannot be distributed to creditors.[119] Without sufficient certainty of subject matter, a trust will fail because it does not attach to any property.[120] There is significant debate about the underlying principles relating to certainty of subject matter.[121] These principles in turn can lead to different outcomes on similar fact scenarios. These principles will be examined in the context of how they might apply to a wallet-provider holding cryptocurrency given the introduction of the Trusts Act 2019.

The Trusts Act 2019 that comes into force on 30th January 20201 states that a person must "clearly and with reasonable certainty … identifies the trust property".[122] This provision reflects the 'certainty of subject matter' requirement in equity. However, there is concern that it may be interpreted according to the unsatisfactory orthodox view of the existing case law.[123] When the Trusts Act 2019 comes into force, a court will not necessarily be bound to follow previous case law as the provisions of the statute take precedence. Furthermore, this provision can only be interpreted in line with the equitable principles at common law

[118] *Re Lehman Brothers International (Europe) (in administration) v CRC Credit Fund Ltd* [2010] EWCA Civ 917, [2011] Bus LR 277 at [171].

[119] Benny Chung "Challenging the orthodoxy: a critique of *Re Goldcorp* and the English law approach to the certainty of subject matter" (2019) 25 Trusts & Trustees 481 at 482.

[120] Butler, above n 62, at 80.

[121] See Tim Bain "Some of mine is yours" (2018) NZLJ 7

[122] Trusts Act 2019 section 15.

[123] Bain, above n 121, at 7.

if it is consistent with the Act's provisions and principles.[124] A notable principle is avoiding unnecessary cost and complexity.[125] As discussed below, the case law surrounding certainty of subject matter is not settled. So, following the introduction of the Trusts Act 2019, a court will have the ability to clarify how 'certainty of subject matter' is determined.

A broad, orthodox view of 'certainty of subject matter' is that the trustees must be "able to identify property held by them within which the trust property may, by computation or otherwise, be located".[126] However, there are several cases which differ on whether property is "identified" in the first place.

Re London Wine Co. (Shippers) Ltd

A general rule highlighted by many commentators is that failure to segregate property will mean there is insufficient certainty of subject matter.[127] The case that is typically referred to for this rule requiring segregation is *Re London Wine Co. (Shippers) Ltd*.[128] In this case, an alleged trust over bottles of wine failed. This was due to the particular wine bottles not being segregated from the rest of the stock.[129]

An example given by the judge in this case of why the trust fails is: [130]

> *"I cannot see how … a farmer who declares himself to be a trustee of two sheep (without identifying them) can be said to have created a perfect and complete trust".*

[124] Trusts Act 2019, s 7.
[125] Trusts Act 2019, s 4(b).
[126] Butler, above n 62, at 77.
[127] Alastair Hudson "Part 2: Express trusts" in *Equity and Trusts* (7th ed, Taylor and Francis, London, 2012), 86 at 117.
[128] *Re London Wine Co. (Shippers) Ltd* [1986] PCC 121
[129] At 137.
[130] At 137.

This often leads to the conclusion that *Re London Wine* is authority for the rule that a trust cannot to exist over an unidentified portion of tangible property.[131] A supporting justification for this principle is that the tangible property, such as sheep and wine, may not all be identical.[132] So, segregation or specific identification is needed as all the property is not the same.

However, the strict enforcement of this rule may be misguided. This is evident when the wider principle that Oliver J was trying to outline is considered. Oliver J's judgment also placed a lot of importance on a settlor's intention when determining certainty of subject matter.[133] Oliver J noted that a trust could have existed over the "homogenous whole" of the stock of wine with a proportion of this whole allocated to the beneficiary.[134] But, this would only arise where the intention of the parties indicated that a portion was meant to be held on trust instead of specific bottles of wine. The customers had been issued with certificates stating they solely owned a certain quantity of wine which was inconsistent with having a portion of the whole stock.[135]

Oliver J notably states that "the subject matter [the wine bottles] is part of a homogeneous mass so that specific identity is of little importance as it is, for instance, in the case of money".[136] This statement supports the conclusion that a trust can occur over a "homogenous mass" because once that mass is identified, it is of little importance which portion is eventually allocated to the beneficiary. However, if this homogenous mass is not identified in the first place, then there is not enough certainty that the settlor intended for any portion of the homogenous mass to be subject to the trust unless it is specifically segregated or identified.

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[131] See Chung, above n 119, at 482.

[132] Butler, above n 62, at 78.

[133] Bain, above n 121, at 7.

[134] *Re London Wine Co. (Shippers) Ltd*, above n 128, at 136.

[135] *Re London Wine Co. (Shippers) Ltd*, above n 128, at 137.

[136] At 137.

So, arguably the *London Wines* judgment supports a principle that certainty of subject matter will be satisfied where an intention clearly points to property that can be identified.

Re Goldcorp Exchange

Despite the possible existence of a wider principle in *London Wines*, the rule requiring segregation was subsequently applied in *Re Goldcorp Exchange.*[137] Goldcorp Exchange Ltd sold gold bullion to customers and provided them with a certificate which would entitle them to delivery of the bullion after notice was given.[138] The agreement with the customer said that Goldcorp would hold enough gold for each certificate. However, there was not enough gold kept to meet the demands of all customers.[139] When Goldcorp Exchange Ltd went into receivership, some customers claimed the gold was held for them on trust even though it was not segregated. This gold was stored in bulk; mixed in with Goldcorp's own gold. It was not allocated to individual customers so it was 'undifferentiated'.

The Privy Council firstly outlined that there are "generic goods" and "goods sold ex-bulk".[140] The former being goods that the seller has the freedom to obtain from anywhere; the latter being goods that are to be sourced from a specific source.[141]

A trust that gives a proportionate beneficial interest in a 'bulk' of the goods (or, in the 'homogenous whole', using the terminology in *London Wines)*[142] was considered valid if it were to be over "goods sold ex-bulk".[143] However, the Privy Council did not view this situation occurring on the facts of the case.

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[137] *Re Goldcorp Exchange Ltd (In Receivership): Kensington v Liggett* [1994] 3 NZLR 385

[138] At 391.

[139] At 386.

[140] At 388.

[141] At 388.

[142] *Re London Wine Co. (Shippers) Ltd*, above n 128, at [136].

[143] *Re Goldcorp Exchange Ltd (In Receivership)*, above n 137, at 394.

The only way for a trust over "goods sold ex-bulk" to arise was if Goldcorp had intended that all the gold bullion for supply to customers would come from its current, general stock. If Goldcorp had intended a trust to arise over the gold in this fashion, they would have been restricted to using their stock of gold solely to deliver to customers who had requested it. However, Goldcorp had its own gold mixed in with this 'bulk' and only maintained levels of gold to meet likely delivery requests.[144] These circumstances indicated it was not Goldcorp's intention that their current stock of gold was held on trust for their customers. Instead, the customers were purchasing 'generic goods', by which Goldcorp had the contractual freedom to obtain from any source.[145] They were just contractually bound to supply gold bullion.[146]

This decision was supported by looking at the customer's intention. Having received a certificate for a specific amount of gold bullion, the customer's intent was inconsistent with a beneficial interest in the general stock levels of gold bullion held by Goldcorp.[147]

Although, the Privy Council did note that in theory a trust could exist over a "constantly changing undifferentiated bulk".[148] However, this would require the parties intention to be for the property that was "goods sold ex-bulk". [149]

Principle from Re London Wines and Re Goldcorp

The main principle followed from these cases is that if the parties have intended for the trust to be over a certain amount of wine bottles or gold bullion, then these must be sufficiently segregated so they can be identified. This is likely because the Privy Council in *Re Goldcorp* cited *Re London Wine* for the principles laid out by Oliver J.[150]

[144] At 385.
[145] At 395.
[146] At 400.
[147] At 394.
[148] At 398.
[149] At 398.
[150] *Re Goldcorp Exchange Ltd (In Receivership)*, above n 137, at 401.

However, *Re Goldcorp* did also align with the principle in *Re London Wine* that a trust can arise over a 'bulk' or 'homogenous whole' where the parties have indicated an intention to do so. However, that 'bulk' or 'homogenous whole' must be sufficiently clear in itself. 'Generic goods' are not clear because they can obtained from anywhere.

Hunter v Moss

In another English case, *Hunter v Moss,* both the High Court[151] and Court of Appeal distinguished the precedents of *Re London Wines* and *Re Goldcorp*.[152] This was on the basis that chattels and intangibles should be treated differently.[153] The principle requiring segregation was held not to apply to intangibles.[154]

In this case, the plaintiff was claiming that a trust existed over company shares held by the defendant.[155] The claim was for 5% of the defendants 1000 equal shares, although, no particular shares had been identified. However, unlike *Re London Wines*, the fact that no shares had been segregated or specifically identified did not undermine the certainty of subject matter.[156] Tangible assets were distinguished from intangibles because "even tangible assets which are regarded as forming part of a homogeneous mass are physically separate, and so distinguishable".[157] Contrastingly, any of the shares, being fungible, were able to equally satisfy the trust.[158]

[151] *Hunter v Moss* [1993] 1 W.L.R. 934
[152] *Hunter v Moss* [1994] 1 W.L.R. 452 at 458.
[153] At 459.
[154] At 457.
[155] At 454.
[156] *Hunter v Moss*, above n 151, at 945.
[157] At 940.
[158] At 935.

It was therefore held that a trust existed because the trust was able to be executed.[159] The plaintiff had a beneficial proprietary interest in 50 shares.[160] The court held that this was different from the plaintiff gaining an equitable charge of 5% over the mixed shareholdings.[161]

In New Zealand, commentators have seemingly endorsed the *Hunter v Moss* approach that intangible property does not need to be segregated.[162] The rule in *Hunter v Moss* was subsequently applied in another English case, *Re Harvard Securities*.[163] So, the distinction between intangibles and tangibles continues in the jurisdiction of England and Wales. Although this decision is not strictly binding in New Zealand and has been questioned by several commentators.

Reconciling the case law

A common view of the collective case law of *London Wine*, *Goldcorp* and *Hunter v Moss*, is that the certainty of subject matter depends on whether a good is tangible or intangible.[164] Tangible trust property must be segregated, but, intangible property does not necessarily need to be segregated. However, there have been several criticisms of this outcome.[165]

An important criticism to consider is that the principle in *Hunter v Moss* directly conflicts with the *London Wines* requirement that requires identification through separation.[166] There should not be a distinction between tangibles and intangibles because the nature of

[159] At 945.
[160] *Hunter v Moss*, above n 152, at 459.
[161] *Hunter v Moss*, above n 152, at 459.
[162] G Fuller *Laws of New Zealand* Trust: PART II Express Trusts at [53]; Farr, above n 77, at [1.3.01].
[163] *Re Harvard Securities* [1997] 2 BCLC 369 at 381.
[164] Benny Chung and Jason Chun Wing Chiu "Right? Wrong? Outdated?: An evaluation of the controversial *Hunter v Moss*" (2020) 26 Trusts & Trustees 114 at 116; Farr, above n 77, at [1.3.01].
[165] Glister and Lee, above n 73, at 85.
[166] Hudson, above n 127, at 124.

the property should not derogate from the requirement of having specific and identifiable property.[167]

This criticism is likely based on how the distinction drawn between tangible and intangible property should instead be between fungible and non-fungible property.[168] The reasoning in *Hunter v Moss* looks at the form the property takes, when the reasoning actually reflects the substance.[169] The fact that any share could equally satisfy the trust comes from each shares substance being identical value. Therefore, the *Hunter v Moss* principle is arguably unjustified to the extent that both can be fungible.[170]

In arriving at his conclusion, Colin Rimer QC in the High Court, gave an example of why tangibles were different.[171] A stock of wine, while seemingly equivalent, "may contain wine that is corked, or may have been stored badly and have deteriorated or may have other inherent defects."[172] However, this further evidences that the underlying concern was that tangibles are not truly fungible and would therefore not equally satisfy a trust. So, if something tangible has identical equivalents, similar to a share having identical equivalents, then Colin Rimer QC's justification for not requiring segregation should presumedly apply equally.

There is a notable corollary to the proposition that intangibles do not need segregation due to being fungible. If an intangible is non-fungible, then the *Hunter v Moss* rule should not apply. This is because a group of non-fungible intangibles may not be able to equally satisfy a trust. The intangible in this case would then be more analogous to the wine example given by Colin Rimer QC, where some may have "inherent defects".[173]

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[167] At 124.
[168] Chung, above n 119, at 486.
[169] At 487.
[170] Hudson, above n 127, at 125.
[171] *Hunter v Moss*, above n 151, at 940.
[172] At 940.
[173] At 940.

This is an issue that could arise for cryptocurrencies. There could be an argument that each cryptocurrency is non-fungible due to being composed of unique strings of data. Although, share certificates and banknotes also have different serial numbers associated with them. The underlying concern of fungibility in regard to share certificates and banknotes can therefore be seen as their identical value.[174] The *Hunter v Moss* rule was not concerned with share certificates that had different serial numbers.[175] So, this reasoning should apply similarly to cryptocurrency. The underlying concern with cryptocurrency is their inherent value so the unique alphanumeric characters should not disqualify them from being considered fungible.

However, the ability to locate a stolen cryptocurrency may disqualify their fungible status.[176] When an exchange is hacked, the public addresses that the cryptocurrency is transferred to can be viewed on the public ledger. The new cryptocurrency contains the transaction history linking it to the previous owner. Analysis of the blockchain can determine where these cryptocurrencies end up.[177] The result of conducting this kind of analysis has shown that most cryptocurrencies end up being ciphered through other exchanges.[178] In 2019 alone, $2.8 billion (USD) in Bitcoin was traced from criminal enterprises to exchanges.[179] So, there is a significant amount of stolen Bitcoin circulating. As discussed in Chapter 3, there are reasons why someone will be at a disadvantage if they purchase stolen Bitcoin. So, stolen cryptocurrency will likely be worth less than legitimate cryptocurrency.[180] Cryptocurrencies that are stolen could be considered as having an "inherent defect" similar to the wine example Colin Rimer QC gave in *Hunter v Moss*.[181]

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[174] Chung, above n 119, at 484.

[175] At 484.

[176] Ross Anderson, Ilia Shumailov and Mansoor Ahmed "Making Bitcoin Legal" in Vashek Matyáš (ed) *Security Protocols XXVI* (Springer International Publishing, Switzerland, 2018) 254 at 257.

[177] "The 2020 State of Crypto Crime", above n 5, at [44].

[178] At [45].

[179] At [9].

[180] Fox, above n 35, at 145.

[181] *Hunter v Moss*, above n 151, at 940.

Although, the decision in *Hunter v Moss* is not strictly binding in New Zealand. There have been other cases that advocate a revised rationale of how certainty of subject matter is achieved.

White v Shortall

In a more recent decision of the Supreme Court of New South Wales, Campbell J noted that the difference between legal principle in *Hunter v Moss* and *London Wine* is not explained in the *Hunter v Moss* judgment.[182] The outcome of *Hunter v Moss* was approved in *White v Shortall*, but, the reasoning for this outcome was not "sufficiently persuasive" and an alternative reasoning was provided.[183]

This case also concerned whether a trust was validly declared over a proportion of shares held by the defendant. The defendant held 1.5 million shares, of which he had said 220,000 were for the plaintiff. Campbell J found that there was a clear intention for 220,000 shares to be held on trust for the plaintiff. Given that no shares were segregated though, the nature of the property was considered.[184] The nature of the shares being indistinguishable from each other meant that any share would give the plaintiff the same property.[185] The trust was also intended to be over the full 1.5 million shares as a whole. So, it was not necessary for the plaintiff to be able to point to any specific shares they owned.[186]

The importance of this was that certainty of subject matter was satisfied from identifying the entire 1.5 million shares. Even though the plaintiff only had a claim to 220,000 shares, the subject matter was certain because these shares were indistinguishable.[187]

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[182] *White v Shortall* (2006) 68 N.S.W.L.R 650 at [185].
[183] At [212].
[184] At [210].
[185] *White v Shortall*, above n 182, at [211].
[186] At [212].
[187] At [213].

This reasoning differs from *Hunter v Moss*. The trust in *White v Shortall* was found to exist over the entire fund with a beneficial co-ownership created in that identified subject matter. Whereas, *Hunter v Moss* found the trust existed over a specific portion being 5% of the shareholdings, with a beneficial proprietary interest vesting in the beneficiary. Although, both cases resulted in the beneficiary obtaining an interest in the shares, the different reasoning is worth noting.

Pearson v Lehman Brothers Finance SA[188]

The decision in *White v Shortall* was subsequently concurred with in *Pearson v Lehman Brothers Finance*.[189] In this decision, the *Hunter v Moss* decision was recognised for the principle that: [190]

> "A trust of part of a fungible mass without the appropriation of any specific part of it for the beneficiary does not fail for uncertainty of subject matter, provided that the mass itself is sufficiently identified and provided also that the beneficiary's proportionate share of it is not itself uncertain.".

However, this was not the ratio of *Hunter v Moss*. *Hunter v Moss* gave a proprietary interest in specific shares to the beneficiary, not a proportionate co-ownership share. Briggs J recognises this difference but indicates that the co-ownership approach is the preferred rationale for reaching the same outcome as *Hunter v Moss*.[191]

Proprietors of Wakatū v Attorney-General

In *Proprietors of Wakatū v Attorney-General*, a recent Supreme Court case in New Zealand, has added to the debate on certainty of subject matter. The discussion occurred in

[188] *Pearson v Lehman Brothers Finance SA* [2010] EWHC 2914 (Ch), [2010] All ER (D) 232.
[189] At [232].
[190] At [225].
[191] At [232].

a vastly different context.[192] This case concerned a failure from the Crown to set aside land that it had promised to the plaintiff's ancestors. The plaintiffs claimed that the Crown was either a trustee or fiduciary with respect to this land.[193] While the land was not identified, there was a process in place to select it.[194]

In the Court of Appeal, *Hunter v Moss* was distinguished due to the non-fungible nature of land.[195] The land was not identified, so the principles in *Re London Wine* and *Re Goldcorp* applied instead. This meant that because it was not segregated, the trust failed.

In the Supreme Court, Elias CJ did not view *London Wine* and *Re Goldcorp* as authority for the principle that trust property always needs to be segregated.[196] Instead of taking this orthodox view, the court recognises that those cases were decided on their own facts. There was no intent in those cases to create a trust over an entire stock of wine or gold. But, this did not mean that this type of trust could never occur. Elias CJ cites Oliver J's statement in *London Wine* for this proposition: [197]

> "The assertion that "you are the sole and beneficial owners of" 10 cases of a particular wine could not have been intended to mean "you are the owner of such proportion of the total stock of such and such a wine now held by me as 10 bears to the total number of cases comprised in such stock"".

Elias CJ recognises the importance that the intention of the trustee and beneficiary must correspond with the subject matter. A lot will ride on whether a trust was intended on the particular facts, but, this intention is supported by being able to identify what the parties wanted to be trust property.[198] If the trust property is a tangible existing as part of a larger stock, then there must be a clear intention that the beneficiary is receiving an equitable

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[192] *Proprietors of Wakatū v Attorney-General* [2017] NZSC 17 at [10].
[193] At [28].
[194] At [578].
[195] *Proprietors of Wakatū v The Attorney-General* [2014] NZCA 628 at [159].
[196] *Proprietors of Wakatū v Attorney-General*, above n 192, at [423].
[197] At [425] citing *Re London Wine Co (Shippers) Ltd* [1986] PCC 121 (Ch) at [137]-[138].
[198] At [423].

interest in the larger stock rather than a specific proprietary claim to certain chattels.[199] Therefore, Elias CJ held the trust property was certain because there was an intent for a specific portion of land to be chosen from an identifiable selection mechanism.[200]

This view will be persuasive coming from the Supreme Court Chief Justice. However, the other judges in the majority came to a conclusion on the case without needing to engage in a discussion similar to Elias CJ.[201] So, there is not the full weight of the Supreme Court behind this view.

Application to cryptocurrency exchanges

The principles surrounding certainty of subject matter have shown to be uncertain. However, the court in *Ruscoe v Cryptopia* engaged in minimal discussion about what principles were applied when it was faced with this issue.[202] The *Re Goldcorp* case was distinguished on the basis it was primarily a Sale of Goods Act case that depended on the tangible property being segregated.[203] Gendall J was instead satisfied that there was certainty of subject matter.

In coming to this conclusion, Gendall J stated that:[204]

> "It is not a significant indicator against a trust that the fungible property of one party is mixed with the fungible property of another in a single pool, nor that the content of that pool and the identity of the beneficiaries is constantly changing."

In *Ruscoe v Cryptopia*, an express trust existed over the whole stock of each of type of cryptocurrency. The beneficiaries each received a proportionate share. This

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[199] *Proprietors of Wakatū v Attorney-General*, above n 192, at [427].
[200] At [433].
[201] At [579], [770] and [913].
[202] *Ruscoe v Cryptopia*, above n 10, at [141] – [147], [157] – [160].
[203] At [158].
[204] At [157].

suggests that an approach similar to *White v Shortall* and *Pearson v Lehman Brothers Finance SA* was taken. However, cryptocurrency users may have to wait for further cases to clarify how the courts will approach this issue under the Trusts Act 2019.

Chapter 3: Legal status of stolen cryptocurrencies

'Nemo dat quod non habet'

The general rule in common law is that where property is stolen the principle of '*nemo dat quod non habet*' (nemo dat) applies.[205] This means that a transferor of property cannot confer a better title to the property than they themselves have. For our purposes, this means that cryptocurrency thieves will not pass on an indefeasible title to the purchaser. Therefore, the legal title to stolen cryptocurrency will likely always rest with the original owner.[206] Consequently, an innocent third party having received stolen cryptocurrency will always be liable to a claim from the original owner.[207] With such high levels of cryptocurrency theft,[208] this could be a serious concern.

If cryptocurrency is stolen, the victims of the theft do not have recourse on the blockchain due to irreversible transactions. However, existing common law and equitable remedies may be available. There may be equitable remedies available in some circumstances.[209] However, if a thief has transferred cryptocurrencies to an innocent third party through a foreign exchange, then an equitable title will likely be extinguished through the equitable bona fide purchaser for value defence.[210]

A remedy that is usually sustainable against both a thief and an innocent third party recipient is the tort of conversion.[211] This would provide a victim of cryptocurrency theft

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[205] *Elwin v O'Regan* [1971] NZLR 1124 at [1132].

[206] Fox, above n 35, at 159.

[207] This is subject to the defences in the Limitation Act 2010 Part 2 and 3.

[208] Gertrude Chavez-Dreyfuss "Cryptocurrency crime surges, losses hit $4.4 billion by end-September: CipherTrace report" (28 November 2019) Reuters <www.reuters.com/article/us-crypto-currencies-crime-idUSKBN1Y11WH>.

[209] Equitable remedies may include enforcement through a constructive or resulting trust; an equitable lien; or, a claim in knowing receipt. See Fox, above n 35, at 175. A claim in 'money had and received' may also be available. See *Lipkin Gorman v Karpnale Ltd* [1991] 2 AC 548; [1992] 4 All ER 512 at 553.

[210] Fox, above n 35, at 159.

[211] Stephen Todd *Laws of New Zealand* Wrongful Interference with Goods: Conversion and Detinue at 228.

a remedy that could result in being awarded damages.[212] An action in conversion may currently be prevented if New Zealand courts follow the strict English authorities. However, there is an increasingly persuasive argument for New Zealand to depart from this precedent. The courts would be directly faced with this decision if a victim of cryptocurrency brought an action against someone found to possess their cryptocurrency.

Conversion

There has long been a recognised precedent that the tort of conversion, being a possessory tort,[213] does not apply to intangible property. In *OBG v Allan*, the House of Lords held that the tort of conversion only applied to tangible chattels and did not apply to choses in action.[214] This was partly due to the tort being historically based on someone having possession of the property in question.[215] Parliament was viewed as responsible for initiating a change to this strong precedent.[216] While this is a non-binding English case, it reflects the view in New Zealand that conversion requires specific personal property rather than intangibles.[217]

Cryptocurrencies were found to be an intangible in *Ruscoe v Cryptopa*[218] and therefore a claim in conversion would fail due to this prevailing view in *OBG v Allan*. However, precedent does not always apply satisfactorily when applied to a new technology. This is particularly so when it is applied to a disruptive technology that is fundamentally differently to previous examples.[219]

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[212] Todd, above n 211, at 261.

[213] The tort of conversion requires the plaintiff to have a right to immediate possession of the property. See *Kuwait Airways Corp v Iraqi Airways Co (Nos 4 and 5)* [2002] UKHL 19 at [39].

[214] *OBG Ltd v Allan* [2007] 4 All ER 545 at [99].

[215] At [95].

[216] At [97].

[217] Todd, above n 211, at 227.

[218] *Ruscoe v Cryptopia*, above n 10, at [120].

[219] David Harvey *Collisions in the Digital Paradigm: law and rule-making in the internet age* (1st ed, Hart Publishing, North America, 2017) at 55.

While cryptocurrencies are intangible, their categorisation in the judgment of *Ruscoe v Cryptopia* fell outside the traditional types of property. They were not considered a chose in possession, nor a chose in action.[220] It remains to be seen how this categorisation will be treated in higher courts. However, this recognises the truly unique nature of cryptocurrency compared to traditional property.

Cryptocurrencies were not around when *OBG v Allan* was decided. So, they were clearly not in contemplation of the court. However, the court was also not likely considering the creation of a disruptive type of property beyond the traditional categories. As explicit evidence of this, the judgment of Lord Hoffman only refers to "specific personal property, whether goods or chattels" or "choses in action".[221] The strict wording of the decision rejects conversion only for "choses in action".[222] This decision may warrant reconsideration, as the principle was likely formulated without any regard to the new type of property seen in *Ruscoe v Cryptopia*.

In New Zealand, there are signs that a court may take the opposite stance. The departure from *OBG v Allan* was recently considered in *Henderson v Walker*.[223] This case is notable in the context of conversion for stating that the High Court is not bound to follow *OBG v Allan*.[224] The court was also not aware of any New Zealand case having definitively decided whether conversion applies to intangible property.[225] So, the possibility to extend conversion to cryptocurrencies remains widely open.

In obiter, Thomas J outlined her view that conversion should extend to digital assets.[226] This follows a concise, yet, well-informed summary of arguments posed for and against

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[220] *Ruscoe v Cryptopia*, above n 10, at [124].
[221] *OBG Ltd v Allan*, above n 214, at [100].
[222] At [106].
[223] *Henderson v Walker* [2019] NZHC 2184
[224] At [254].
[225] At [256].
[226] At [270].

the extension.[227] Her judgment aligned with the view that restricting conversion to certain subject matter is founded on a misconception of the tort. Since the tort of conversion protects property interests, it should be shaped by the nature of legal interests existing. [228] It should not be confined by what form those legal interests are attached to.[229]

The legal interest that conversion aims to protect is property, but only in circumstances where it is factually possessed.[230] Assuming cryptocurrency is been held to be property like in *Ruscoe v Cryptopia*, that leaves the issue of possession as the only debatable factor. Cryptocurrency owners maintain their ownership through having exclusive access to the private key. This gives them full control over what happens with the cryptocurrency, whether it be spent or saved. Equating this with the normal conception of possession may be difficult. There is nothing for an owner to hold. Because cryptocurrencies are intangible, the formal view is that they cannot be possessed.[231] However, there is scope to argue that intangibles can be possessed when possession is viewed as a concept.

The concept of possession requires a cognitive and manual element.[232] A cryptocurrency owner would satisfy the cognitive element from intending to exclusively control the cryptocurrency. The manual element would require the cryptocurrency to have "exclusivity and exhaustivity".[233] The judgment in *Ruscoe v Cryptopia* may provide direct authority that this can be satisfied also.[234] The exclusivity is created from having a public key and private key.[235] The exhaustibility comes from a new private key being generated after each transfer.[236] If this approach was taken, then the court would have a reasoned and principled approach to extend the tort of conversion.

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[227] At [259]-[270].

[228] Sarah Green "To Have and to Hold — Conversion and Intangible Property" (2008) 71 Mod L Rev 114 at 115.

[229] At 115.

[230] Green, above n 228, at 116.

[231] Fox, above n 35, at 155.

[232] Green, above n 228, at 116.

[233] At 116-117.

[234] *Ruscoe v Cryptopia*, above n 10, at [97]-[98].

[235] At [112].

[236] At [120].

Coming back to the decision in *OBG v Allan*, the dissenting judgment of Lord Nicholls is now increasingly convincing. Lord Nicholls recognises that the law does not protect intangibles with a remedy equivalent to conversion.[237] However, the law has evolved pragmatically to allow select intangible rights to be protected.[238] Intangible obligations that are recorded on a tangible document, such as a document of title or insurance policy, are subject to conversion.[239] Lord Nicholls as part of the minority judgment, thought that the common law should develop to the modern world. Although, it is concluded that tort of conversion should be extended to contractual rights only[240]. But, as stated earlier, cryptocurrencies were not around for Lord Nicholls to consider. It is likely that if Lord Nicholls had been willing to extend the tort to contractual rights, then an extension to cover cryptocurrencies will have equally been desired.

Good faith purchaser for value

If you are purchasing cryptocurrency through an exchange, there is a possibility that this is stolen. The 'good faith purchaser for value' rule provides circumstances where someone can take legal title to money free from any adverse legal interests.[241] In other words, a person will receive good title to stolen money if they have acted in good faith and have provided value. This is an exception to the 'nemo dat' rule. It developed initially in regard to physical money to protect purchasers against receiving a defective title in transactions.[242]

This exception may also equally apply to cryptocurrencies if they are classified as "money" in the law. However, the current common law definitions of "money" are not clear. This provides further uncertainty for cryptocurrency owners as to how their cryptocurrency will

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[237] *OBG Ltd v Allan*, above n 214, at [225].

[238] At [228].

[239] *OBG Ltd v Allan*, above n 214, at [225].

[240] At [233].

[241] David Fox *Property Rights in money* (1st ed, Oxford University Press Inc., New York, 2008) at 276-277.

[242] At 275.

be treated. So, the next chapter will analyse whether cryptocurrency is likely to be deemed 'money'.

Although, whether the good faith purchaser for value rule applies will come down to the impugned transaction. Even if cryptocurrency is classified as 'money', many transactions may not be subject to this rule. In *Moss v Hancock* the judge asked was the "gold piece passed on in its character as coin of currency, or was it rather the subject of a sale as an article of virtù"[243] This shows how an asset must be treated as 'currency' to come within the rule. In *Moss v Hancock*, the gold piece was not used as currency for its stated nominal value, but rather was the subject of a sale similar to the purchase of a medal.[244] So, the rule will not apply if cryptocurrencies are purchased as the subject of a transaction, such as buying them for an investment.

[243] *Moss v Hancock* [1899] 2 QB 111 at [116].

[244] *Moss v Hancock* at [117].

Chapter 4: Cryptocurrencies as money

When Satoshi Nakamoto first created Bitcoin, it was intended to be a peer-to-peer electronic cash system.[245] The labelling of Bitcoin as a 'cash system' may represent a common misconception that cryptocurrencies are money.[246] However, the intention of the system to operate similarly to cash does not equate cryptocurrencies with money in common law. Cryptocurrencies would have to be characterised as money according to their features.

Definition of money

It is important to first distinguish between legal tender and money. Legal tender is only a type of money which can legally discharge a debt if it is offered.[247] Section 27 of the Reserve Bank of New Zealand Act 1989 gives exclusive status of legal tender in New Zealand to bank notes or coins issued under that Act. It is clear that cryptocurrencies do not constitute legal tender; as confirmed by the FMA.[248] However, legal tender falls within the broader category of money.[249] There are other types of 'money' that do not have an exclusive statutory definition.

There has been little case law dealing with the definition of 'money'.[250] But a passage frequently cited from *Moss v Hancock* states that 'money' is:

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[245] Satoshi Nakamoto, "*Bitcoin: A Peer-to-Peer Electronic Cash System*" (October 2008) Bitcoin < https://bitcoin.org/bitcoin.pdf >

[246] Bitcoin is described as a "new kind of money" on their website. See "Bitcoin" (2020) Bitcoin.org <bitcoin.org/en/>

[247] Nick McBride *Payments and the concept of legal tender* (Reserve Bank of New Zealand, Bulletin Vol. 78 No. 6, September 2015) at 5.

[248] "Cryptocurrency" (27 May 2019) Financial Markets Authority <www.fma.govt.nz/investors/ways-to-invest/cryptocurrencies/>.

[249] Charles Proctor *Mann on the Legal Aspect of Money* (6th ed, Oxford University Press Inc., New York, 2005) at 66.

[250] At 9.

> *"that which passes freely from hand to hand throughout the community in final discharge of debts and full payment for commodities, being accepted equally without reference to the character or credit of the person who offers it and without the intention of the person who receives it to consume it…"*[251]

An initial appraisal might suggest that a cryptocurrency such as Bitcoin fits this broad definition. Within online communities, Bitcoin is often used to purchase commodities or pay off debt. Bitcoin transactions often occur anonymously, which evidences there is no reference to the person offering it. A Bitcoin is also never consumed but merely transformed on the blockchain. However, there are academic theories which provide more technical formulations of the definition of money.

Theories of money

The State theory of money and Society theory of money are two legal theories that try to define money. Cryptocurrencies are unlikely to currently constitute 'money' under either theory as confirmed by Charles Proctor.[252] However, there are some unique considerations that the current common law view of money will have to grapple with.

The Society theory of money focuses on how a society uses a medium of exchange.[253] If society is using an asset in the same fashion as money, then this would justify classifying it as money. However, this theory is viewed as not providing a satisfactory legal definition because it overlooks the fundamental role that a State has in constituting money.[254] The dominant theory of what legally constitutes money is the State theory of money.

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[251] *Moss v Hancock* [1899] 2 QB 111 at [116].

[252] Charles Proctor concluded that cryptocurrencies satisfy neither theory. See Charles Proctor "Cryptocurrencies in International and Public Law Conceptions of Money" in David Fox and Sarah Green (eds) *Cryptocurrencies in Public and Private Law* (1st ed, Oxford University Press, New York, 2019) 33 at 37.

[253] Proctor, above n 253, at 23.

[254] At 23.

The traditional State theory of money requires an asset to be authorised by the state and have certain economic functions. The economic functions required are outlined as being a medium of exchange; a unit of account; and, a store of value.[255] However, as discussed below, the modern view of the State theory of money does revise the necessity of some of these elements.

Medium of exchange:

Functioning as a universal medium of exchange is fundamental to any legal or economic definition of money.[256] Two issues with the cryptocurrency system satisfying this element would arise under the State theory of money. Firstly, the cryptocurrency system is a 'medium' that is inherently different to previous types of money. Secondly, the current use of cryptocurrencies in society needs to be compared to traditional money.

The traditional take on the State theory of money would require money to be a physical object.[257] However, this requirement is likely obsolete in modern day.[258] The existing law has already developed pragmatically to allow different mediums to function as money.
In modern day, there are several different 'mediums' functioning as money. Examples are the banknote and bank money. Banknotes were developed as a form of promissory note.[259] They are regarded as a type of tangible property due to being recorded on something physical. Although, the physical banknote actually represents a chose in action.[260] This means the holder of the physical banknote has a right to be paid the amount stated on the note by the bank.[261]

[255] At 10-12.
[256] Proctor, above n 253, at 28.
[257] At 15.
[258] At 25-26.
[259] Fox, above n 245, at 11.
[260] At 11.
[261] At 11.

Banknotes differ from bank money. Bank money can be thought of as the bank balance a customer has which in modern day is represented digitally.[262] This is a purely intangible type of property. It is a chose in action that entitles a customer to the amount reflected in that balance.[263] So, the digital bank balance does not constitute digital property itself but is only a record of rights.[264] However, the bank balance is transferrable, so, this has become a medium of exchange itself.[265]

The common use of bank money to discharge debt is an example of how 'money' can be intangible.[266] So, the common law definition is well placed to incorporate a 'medium' that is intangible into its definition of 'money'. The intangibility of cryptocurrencies therefore is not a factor preventing their categorisation as a medium of exchange.

The universal use of cryptocurrency in New Zealand is likely to be more of an issue. In *Miller v Race*, the court recognised an extension of what could be categorised as 'money'.[267] This recognised the inclusion of banknotes as 'money' in the context of the 'good faith purchaser for value rule'. Importantly, this case shows the need for a medium of exchange to be used universally within society. The decision was largely in part due to banknotes being "constantly and universally" treated by society as an equivalent to the existing money at the time, cash.[268]

Cryptocurrencies like Bitcoin, can be used as a method for paying for goods and services. However, an issue with Bitcoin being considered money, is that they are not always used this way. Cryptocurrencies are not yet commonly used as a standard form of payment in New Zealand.[269] They can be used as a medium of exchange like traditional money, but a

[262] At 11.
[263] At 12.
[264] Low and Teo, above n 66, at 230.
[265] Fox, above n 245, at 12.
[266] Proctor, above n 253, at 26-27.
[267] *Miller v Race* (1757) 1 Burr 452 at 457\.
[268] At 457.
[269] Sims, Kariyawasam and Mayes, above n 4 at 78.

considerable amount of cryptocurrency use is for speculative investment.[270] Their use to effect payments could increase rapidly as people become accustomed to their use.[271] Therefore, as the usage of Bitcoin changes, so too might the strength of the argument that Bitcoin should be classified as money. But, currently this is not the case.

Cryptocurrencies lack the 'universal' use that is required to qualify as a medium of exchange. However, it is worth noting that their intangible nature is unlikely to prevent them meeting this requirement. This is promising for the cryptocurrency sector. Yet, it would still leave some uncertainty for their users because the threshold for 'universal' use does not seem definitive. It is clear that currently they do not meet this threshold. But, determining if this threshold is met in the future will likely have to be in reliance on a court decision or Parliament intervention.

Unit of account

There is a traditional requirement that money is to be denominated in a unit of account.[272] This unit is to be determined by the state. In New Zealand, the unit of currency is the New Zealand dollar.[273] This creates the ability for money to be measured and for other goods and services to be valued.

When cryptocurrencies are issued, they usually described in their own unit of account. For example, a user of Bitcoin will have their balance displayed in how many 'Bitcoin' they own. The amount of 'Bitcoin' can be converted into a dollar figure based on the going rate at the time. However, it is does not meet the strict requirement of being expressed in the New Zealand dollar.

[270] Tara Mandjee, "Bitcoin, its Legal Classification and its Regulatory Framework" (2015) 15(2) 4 Journal of Business & Securities Law at [164].
[271] Sims, Kariyawasam and Mayes, above n 4, at 78.
[272] Proctor, above n 253, at 27.
[273] Decimal Currency Act 1964 section 5

Their failure to be a unit of account is could be viewed in part because their value depends on being converted into New Zealand dollars similar to a simple commodity.[274] Although, this overlooks the inherent nature of a cryptocurrency system. As discussed in chapter one, their value comes from the common view of participants and is represented solely by a record on the blockchain. The point of a cryptocurrency system is to create its own exchange system which is based on their own unit, such as a one Bitcoin.

So, cryptocurrencies likely only fail being a 'unit of account' for not being expressed in New Zealand dollars. They can be contrasted with how treasury bills fail to be a unit of account. Treasury bills are denoted in dollars but only represent a claim to money.[275] They use the unit of account for the purpose of measuring how much they are worth.[276] They are not money themselves. However, a Bitcoin does not represent some other claim, nor does it measure itself against some other unit of account. It simply exists on the blockchain representing a unit itself. So, it is arguable that cryptocurrencies themselves do constitute a unit of account, albeit in their own system.

Cryptocurrencies fail to be a unit of account through lack of being denoted in New Zealand dollars. Although, they do have the inherent quality of a unit of account.

Store of value

The traditional legal definition of money also requires the asset to be a store of value. [277] Although, this is likely an economically influenced requirement.[278]

[274] Sarah Green "It's Virtually Money" in David Fox (ed) *Cryptocurrencies in Public and Private Law* (1st ed, Oxford University Press, New York, 2019) 13 at 21-22.
[275] Proctor, above n 253, at 27-28.
[276] At 27-28.
[277] Proctor, above n 253, at 29.
[278] At 29.

From an economic perspective, an argument against cryptocurrencies being a store of value is that they extremely volatile.[279] Bitcoin, as an example, has seen periods of extreme volatility. Going from over $18,000 USD for one Bitcoin in 2017 to nearly as low as $3000 USD in 2018.[280] This leads some economist to question whether cryptocurrency does actually store value or whether it is just a speculative investment.[281]

However, many major government issued currencies can be seen to have stability issues because of government fiscal and monetary policies.[282] Furthermore, there are innovative technological developments aiming to reduce this volatility issue. "Stable coins" have been developed wherein one cryptocurrency is backed by another cryptocurrency.[283] This is based on the theory that prices should not depart far from the backing cryptocurrency.[284] So, while volatility may be an issue now, there is a drive to reduce this. In the future, volatility may become negligible as a factor that discounts cryptocurrency as being a store of value.

Although, how the value is stored in a cryptocurrency differs vastly to traditional money.[285] Some traditional money can be held physically, such as a coin. Alternatively, you may hold a right against a bank for the value of your deposits. However, cryptocurrency holders do not possess something tangible and have no right against a trusted third party. Instead, the value comes from a collective view that the ability to transact with cryptocurrency, this "ideational construct", is worth something.[286] So, recognising this store of value would require a significant departure from the traditional ways that value is 'stored'.

Whether a cryptocurrency is a store of value will be influenced largely by economic arguments. Currently, they are not as stable as traditional money and the underlying system

[279] Yermack, above n 3, at 41.
[280] "Crypto Markets" Bitcoinaverage.com <https://bitcoinaverage.com/en/bitcoin-price/btc-to-nzd>.
[281] Yermack, above n 3, at 41.
[282] Mandjee, above n 274, at [168].
[283] Sims, Kariyawasam and Mayes, above n 4, at 80.
[284] At 80.
[285] Sarra and Gullifer, above n 24, at [235].
[286] Fox, above n 35, at 158.

for storing value is inherently different. So, it is likely they will fall outside the traditional view of a 'store of value'.

State recognition

A cryptocurrency would likely have to operate within a legal framework to attain the legal status of 'money'.[287] This requirement comes from the traditional State theory of money which would require money to be issued and authorised by the law.[288] Under this theory, any medium of exchange would not be deemed 'money' if it was not authorised by some legislative framework.[289] Current cryptocurrencies are privately operated systems. So, without new legislation they would not be considered money under the traditional view.

Although, the modern formulation of the State theory does not necessarily require money to be issued by the state.[290] But, some recognition of the asset from the State is still required. The legislative framework provided by the State will, at the very least, define the unit of account of a monetary system.[291] Cryptocurrencies are not expressed in the legally recognised unit of account, the New Zealand dollar. Therefore, they would not qualify as money under the modern formulation of the State theory of money either.

Conclusion on traditional definition of 'money'

On a legal analysis based on current theories of money, it is unlikely that any cryptocurrency will be able to satisfy the definition of money. They are likely to fail to meet any of the traditional functions of money. But, even if this were to change, cryptocurrencies still fail to be recognised by the law in New Zealand. So, cryptocurrencies

[287] Proctor, above n 253, at 14.
[288] At 15
[289] At 20.
[290] At 35.
[291] At 35.

may not constitute money broadly in the law for monetary regulation. However, the meaning of 'money' will often depend on the context.[292]

In the context of the good faith purchaser for value rule; a common view is that this has historically only required the asset to only function as money.[293] As discussed, cryptocurrencies would come closer to achieving this definition since recognition by the law is not necessarily required. Although, as concluded above they are currently unlikely to completely satisfy the functions of money either. However, the economic and traditional legal definitions of money are seen as overly restrictive in some contexts.[294] This may prove to be true in the context of the 'good faith purchaser rule' where the formulation of 'money' should arguably be less confined.

Money in the context of the 'good faith purchaser for value rule'

Cryptocurrency may be able to satisfy a definition of money that solely focuses on its operation as a medium of exchange. The legal argument to support this would be that money should be determined by what the medium of exchange does, instead of what features it has.[295] This argument is supported by looking at the rationale and development of the good faith purchaser rule.

Rationale behind the 'good faith purchaser for value' rule

Initially, the 'good faith purchaser for value' rule was said to exist because coins could not be differentiated.[296] It was impractical to determine who owned certain coins. So,

[292] At 9.

[293] Fox, above n 35, at 161.

[294] See generally Green, above n 278.

[295] Benjamin Geva and Dorit Geva "Non-state Community Virtual Currencies" in David Fox and Sarah Green (eds) *Cryptocurrencies in Public and Private Law* (1st ed, Oxford University Press, New York, 2019) 281 at 287.

[296] David Fox "Bona Fide Purchase and the Currency of Money" (1996) 55 C.L.J. 547 at 553-554.

possession inferred ownership.[297] Although, this did not explain why banknotes became subject to the rule. Banknotes, as a modern form of promissory notes,[298] can be specifically identified due to distinct labelling.[299] So, the rationale behind the rule had to be refined when the rule was extended to banknotes in *Miller v Race*.[300] As discussed by David Fox, the decision in *Miller v Race* did not create the 'good faith purchaser for value rule', but rather just defined its rationale more eloquently.[301]

David Fox points out two aspects of the *Miller v Race* judgment that are important to consider in relation to cryptocurrencies. Firstly, Fox points out that the *Miller v Race* decision reformulates why the good faith purchaser for value rule exists.[302] The good faith purchaser rule was viewed as the reason why money passed as currency.[303] Currency is a legal attribute of money which can give the possessor a good legal title against all.[304] It was not because money was indistinguishable and impractical to determine who it belonged to.

The need for money to pass as currency was recognised by Fox's second point. This was to facilitate a medium of exchange, such as coins and banknotes, to operate efficiently in the economy. David Fox noted that the court was concerned with upholding commercial efficiency:[305]

> *"If money and goods are to circulate readily in the market—as the pace of the modern economy demands that they must—then transactions cannot be impeded because a recipient needs to make detailed inquiries into the title of a person tendering money or goods."*

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[297] At 553-554.
[298] At 557.
[299] At 558.
[300] *Miller v Race*, above n 271, at 457.
[301] Fox, above n 300, at 563.
[302] At 563.
[303] At 563.
[304] Fox, above n 245, at 19.
[305] Fox, above n 300, at 564.

The concern of the court in *Miller v Race* that is aptly captured by Fox above may be the key reason for advocating cryptocurrencies should also fall within the 'good faith purchaser for value' rule. The purpose behind the 'good faith purchaser for value' rule is to support the 'currency' feature of money. This 'currency' attribute is what makes the medium of exchange work so efficiently in markets. If a medium of exchange was subject to the strict 'nemo dat' rule, this could make transactions less efficient. They may be slower to allow someone time to inquire about the legal title, or, they could trade at a discount to account for the risk of receiving something stolen.[306]

As we have seen in Chapter 3, the strict application of nemo dat would leave an innocent purchaser of stolen cryptocurrency open to claims from the original owner. So, the good faith purchaser rule would equally allow cryptocurrencies to function as an efficient medium of exchange. Although, the argument can become somewhat circular. The 'good faith purchaser for value' rule is required to support a medium of exchange operating efficiently in the market as currency. Yet, to qualify for the rule, that medium of exchange must be used universally as currency. We have seen that a cryptocurrency will not be as efficient economically if it cannot be passed as currency. So, this could affect its ability to be used universally as a medium of exchange.

So, the 'good faith purchaser for value rule' may be necessary in the first place to allow the medium of exchange to be used universally. This circular argument highlights David Fox's view that the *Miller v Race* decision actually came in part from a statutory change allowing promissory notes to be transferred in currency.[307] So, statutory recognition may be required for cryptocurrencies to come under the 'good faith purchaser rule'.

Do cryptocurrencies need to be used 'universally'?

[306] Fox, above n 245, at 54, 60.

[307] Fox, above n 300, at 562.

Sarah Green has advocated for cryptocurrencies to be treated as money in the private law. Green accepts that cryptocurrencies do not meet the current definition of 'money.[308] However, she argues that the justifications behind the technical legal definition do not hold the same weight in a private law context.[309]

Green believes that the definition of 'money' in private law should be focused on whether an asset functions as a medium of exchange.[310] Green's argument is effectively that cryptocurrencies are traded as currency so they should be treated as such. Using the example of *Moss v Hancock*, Green is arguing that cryptocurrencies are not traded as the subject of sale, such as the sale of a medal. Instead they are traded as currency for their stated nominal value. To treat cryptocurrency in private law the same as a sale of a medal would be to go against the parties intentions and defeat the economic function of cryptocurrency. Cryptocurrencies should therefore be treated as money for private law purposes because they function the same between parties, and their differences only arise when considering their wider economic and political functions.[311]

A notable criticism from Green is of the requirement for a medium of exchange to be used universally.[312] Green argues that the reason why private law treats an asset as money does not justify a requirement that an asset is used universally. The requirement for them to be used universally has come from the economic view. So, this should not prevent a cryptocurrency from being characterised and protected similar to transactions with money.[313]

The cryptocurrency system providing economic efficiency

[308] Green, above n 278, at 18-19.
[309] At 13-14.
[310] At 18-21.
[311] At 30.
[312] Green, above n 278, at 19.
[313] At 21.

The good faith purchaser for value rule has been shown to promote commercial efficiency by removing the need to check the title of money. Although, a necessary premise leading to this conclusion may not hold the same for cryptocurrencies. This premise is that requiring someone to check the title of money would destroy the ability of money to be used as a medium of exchange.[314]

The origins of cryptocurrencies are plain to see for everyone on the open source blockchain. Although, the blockchain does not contain information about the legal title. So, there is no straightforward way to be certain you are not receiving stolen cryptocurrency. Whether economic efficiency is impacted enough to justify the good faith purchaser rule is something that will require contemplation of how the cryptocurrency works. But, it will also require consideration of outside factors such as how cryptocurrency exchanges may be used in preserving their function as a medium of exchange.

If accurate tracing methods are created, then the purpose of the good faith purchaser rule could be achieved by instead putting the onus on third parties like cryptocurrency exchanges to not trade in stolen cryptocurrencies. This shows that the legal analysis will also have to give sufficient weight to policy issues arising from the disruptive nature of the technology involved. This will not be a straightforward application of existing precedent.

Conclusion

The development of the good faith purchaser rule has accommodated the need for an efficient medium of exchange. Unfortunately, the need for an efficient medium of exchange is likely signalled to a court by universal use combined with statutory recognition. While there are strong arguments that cryptocurrencies would benefit from being treated as money in the private law, this is likely a wide ranging policy argument that could be viewed as best left for Parliament. So, cryptocurrency users should be aware that cryptocurrencies are

[314] Andrew Balthazor "The Bona Fide Acquisition Rule applied to Cryptocurrency." (2019) 3 GLTR 402 at 415.

unlikely to be classified as money due to their lack of universal use and statutory recognition.

Tax treatment

The stance of Parliament on whether it may treat cryptocurrency as money in the future could be signaled by a recent tax proposal. Currently, the development of New Zealand's cryptocurrency sector has been hindered by the uncertainty of cryptocurrency taxation, particularly the application of the goods and services tax (GST).[315] This can be viewed in part due to the current tax treatment of cryptocurrencies in New Zealand law as stifling their operation as a medium of exchange.

The Inland Revenue Department (IRD) provided guidance that cryptocurrencies were to be taxed as personal property, not a foreign fiat currency.[316] Therefore, cryptocurrency proceeds will be subject to tax in most situations where someone has sold, traded, or exchanged them.[317]

Whether GST is payable on purchases and sales of cryptocurrency has been an additional concern.[318] Since, the IRD is treating cryptocurrency as property then this suggests GST is payable.[319] The consequence of this is that cryptocurrencies will be subject to double taxation. A similar situation previously existed in Australia. Tax would be paid when the cryptocurrency was purchased and then when it was exchanged for other goods or

[315] Simon Akozu and Zoe Barnes "Insight: New Zealand Proposing to Remove Tax Barriers to Cryptoasset Investment" (19 March 2020) Bloomberg Tax <https://news.bloombergtax.com/daily-tax-report-international/insight-new-zealand-proposing-to-remove-tax-barriers-to-cryptoasset-investment>.

[316] Inland Revenue Department "Cryptoassets" <https://www.ird.govt.nz/crypto-currency >.

[317] Income Tax Act 2007 s CB 4; Inland Revenue Department "Buying and selling cryptoassets" <https://www.ird.govt.nz/cryptoassets/individual/buying-selling>

[318] Sims, Kariyawasam and Mayes, above n 4, at 79.

[319] At 79.

services.[320] This further detracts from their ability to function similarly to money because of having a tax disadvantage.[321]

However, the IRD has proposed a retrospective change to the GST tax rules concerning cryptocurrencies.[322] This proposal suggests that cryptocurrency should be excluded from GST.[323] This would bring cryptocurrencies in line with how money is treated for GST purposes.[324] The IRD noted that the current GST rules disadvantage those who use cryptocurrency instead of money.[325] The proposal to remove GST is seen as encouraging the use of cryptocurrencies in New Zealand.[326]

This paper from the Inland Revenue department evidences a possible view that cryptocurrency operates similar to money, so should be treated similar in the law. The key function of making payments with cryptocurrency is recognised as being undermined through enforcing GST. Notably, the report indicated that "the existing definitions of money … were not designed with crypto-assets in mind".[327] This suggests that the Inland Revenue may have extended the definition of "money" for tax purposes had cryptocurrencies been around. This move would be in line with the Australian approach. The Australian approach removed GST to prevent the growth of the financial technology sector being curtailed.[328]

This shows that Parliament is willing to consider treating cryptocurrencies similar to money in tax. If these proposals are adopted, it would provide support for recognising

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[320] Anne Fairpo "Taxation of Cryptocurrencies" in David Fox and Sarah Green (eds) *Cryptocurrencies in Public and Private Law* (1st ed, Oxford University Press, New York, 2019) 255 at 268.

[321] Sims, Kariyawasam and Mayes, above n 4, at 80.

[322] Inland Revenue *GST policy issues – an officials' issues paper* (Policy and Strategy, Inland Revenue, February 2020)

[323] At [17].

[324] At [15].

[325] At [16].

[326] At [16].

[327] At [15].

[328] Fairpo, above n 324, at 269.

cryptocurrencies as a ‘universal’ medium of exchange. Therefore, there may be a stronger argument for adopting the ‘good faith purchaser for value’ exception.

This arguably reflects the current position of the law on whether cryptocurrency is ‘money’. While ‘cryptocurrency’ serves similar functions to traditional money, action is required by Parliament to give legal effect to treating it as money.

Conclusion

This dissertation has considered three issues that may arise in the future following a cryptocurrency exchange hack. While they have been analysed individually, they should be viewed together as only a minor part of the legal uncertainty facing cryptocurrency owners.

The rules in equity that determine if an express trust has been established will apply directly to cryptocurrency cases. This is likely due to the rules focusing mainly on the relationship existing between a wallet-provider and a user. The property subject to that relationship is only ancillary. However, the rules themselves being unsettled creates uncertainty. Given that many exchanges do not clearly document how they hold cryptocurrencies, the average investor should be forgiven for not knowing what their rights are if that exchange goes into liquidation. Although, it would be easy for a cryptocurrency exchange to take steps to let users know if the cryptocurrency will be held on trust. This seems like a simple action that would clear some uncertainty.

Currently, the common law remedy of conversion has not been extended to intangible property in New Zealand. Consequently, cryptocurrency owners may have a lot less protection than owners of tangible property. However, the scene has been set for the common law to take a bold step and keep up with technological advances. A case bringing claim in conversion of cryptocurrency would squarely test the New Zealand court's allegiance to the non-binding, arguably outdated rule in *OBG v Allan*. Although, this hypothetical case may remain just that. The practical ability to successfully trace and identify the holder of the stolen cryptocurrency may prevent a cryptocurrency conversion claim from occurring any time soon. Yet, a claim in conversion for another kind of digital asset may serve as a signaling precedent. The uncertainty for cryptocurrency owners may have to wait until a test case is brought before the courts.

Finally, the consequence of nemo dat needs to be seriously considered. Currently, all stolen cryptocurrency will be subject to the original owner's claim of indefeasible title. Once

again, this is subject to finding and identifying a holder of that cryptocurrency. However, the theoretical discussion is still important. The concern of innocent purchasers may be compounded if New Zealand expands the tort of conversion. Then, innocent purchasers could equally be liable to return the cryptocurrency.

The current legal definition of money clearly excludes cryptocurrencies. This could have been expected remembering that these are privately designed assets existing in a different paradigm to current money. However, they will not be able to attain the legal attribute of 'currency' without an exception to 'nemo dat'. This may impact on their ability to function with the same economic efficiency as money. The 'good faith purchaser for value' rule could arguably require a less stringent definition of money. The courts have historically been able to apply it to new forms of money. Support for the application of this rule comes from focusing on cryptocurrencies function as a medium of exchange and facilitating transactions. However, cryptocurrencies are still not widely used which seems to be at least the minimum requirement for extending the rule. The extension of the rule previously was actually influenced in part from statutory changes as well. Given this, it is unlikely the common law would be able to depart from the current status that nemo dat applies. The answer to whether this is desirable or not in New Zealand is a policy question that would require independent research. However, if it was desired then Parliament would likely need to act to change this status quo.

We have seen government agencies taking steps to promote the use of cryptocurrencies. However, Governments worldwide have refrained from specific legislation partly due to the uncertainty of its effects as well as a fear of getting it wrong. The extreme complexity of cryptocurrencies and their position in law likely warrants an in-depth holistic analysis of both the legal and economic consequences. However, in the meantime, the common law and equity seem to currently have the capability to accommodate cryptocurrencies in certain aspects. But, how it will apply will leave cryptocurrency owners with uncertainty for the time being. In the absence of regulation, it will take time for test cases to clarify all these issues. This is an interesting yet challenging field of law in the process of developing.

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