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Vincent OOI

Singapore Management University, vincentooi@smu.edu.sg

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A Framework for Understanding the Taxation of Digital Tokens

By

Vincent OOI*

Abstract

As a relatively new area, the taxation of digital tokens can give rise to several dangerous misconceptions. This article lays out five propositions to counter these misconceptions: 1) digital tokens are not a single monolithic asset class attracting uniform tax treatment; 2) the common trichotomous division of digital tokens into payment, utility and security tokens is derived from securities regulation and should not be blindly adopted into tax law; 3) the three classes are not mutually exclusive and hybrid tokens may exist; 4) the fact that an asset is a digital token rarely changes its tax treatment by itself, which must be determined by the surrounding circumstances of the relevant taxable event; and 5) there are broad similarities in the way that digital tokens of the same class might generally be taxed across a variety of common taxable events, which might provide a useful broad overview of this field.

A. Introduction

While digital tokens are becoming increasingly accepted as a part of commerce, little tax jurisprudence exists that can shed some light on their proper tax treatment. The novelty of digital tokens, coupled with insufficient tax knowledge and some extent of wishful thinking, may lead to some misconceptions on the part of taxpayers. This article seeks to address these misconceptions by laying out five propositions for the taxation of digital tokens. Firstly, digital tokens are not a monolithic asset class attracting uniform tax treatment. The wide variety of ways in which digital tokens may be commercially used makes it untenable to assume that the classification of an asset as a digital token will in itself tell us anything about how it might be taxed.

Secondly, the common trichotomous division of digital tokens into payment, utility and security tokens is a classification largely based on the law of securities regulation. Care must be taken when transplanting the concept into tax law, since the rationale for such a classification scheme under securities regulation may not necessarily be similarly applicable under tax law. Thirdly, even under this classification scheme, the three classes of digital tokens are not mutually exclusive and hybrid tokens may exist. These first three propositions suggest that one should be cautious about broad and simplistic generalisations with respect to digital tokens. One cannot say with certainty that just because a digital token falls into one of the three classes, it must necessarily be subject to a particular kind of tax treatment. In general, tax law works in

* MA (Oxon), Lecturer, Yong Pung How School of Law, Singapore Management University. The author is extremely grateful to the Tax Academy of Singapore for supporting this research. He would also like to thank the anonymous reviewers for their insightful comments.

a fundamentally different way, primarily focusing on the circumstances surrounding the taxable event, and only secondarily on the asset in question (if at all).¹ Section B of this article lays out the general background on the taxation of digital tokens and elaborates upon the first three propositions.

Fourthly, the fact that an asset is a digital token does not generally change its tax treatment in and of itself. This will still have to be determined through the application of orthodox tax principles, based on the surrounding circumstances of the relevant taxable event. However, there are certain relatively rare but notable exceptions to the proposition that the nature of the asset does not generally affect its tax treatment. Section C of this article elaborates on this.

Identifying which class a digital token falls under is not a totally futile exercise, provided one remembers that the focus must always be on the circumstances surrounding the relevant taxable event. Digital tokens have a wide variety of taxable events, making it useful to have some kind of conceptual framework to navigate this field, even if the framework might not be perfect. There is utility in spotting patterns in tax treatment across various classes of digital tokens. The proposed framework might be built on the fifth proposition, namely that digital tokens of the same class are generally taxed in broadly similar ways as they tend to have similar surrounding circumstances. For example, utility tokens generally entitle the owner to redeem goods or services. As such, it is relatively rare for them to be made obtainable by mining² as compared to payment tokens, since there must ultimately be someone who is willing to underwrite the utility tokens through the provision of such goods or services. Tax issues relating to mining are thus likely to be rare for utility tokens. Instead, since they are akin to vouchers, such tokens are likely to be issued for a similar purpose, with the result that when they are sold, there are likely to be income tax and GST/Value Added Tax (“VAT”) implications on the basis that payment is received for the future delivery of goods or services. Ultimately, it is the surrounding circumstances that will determine the tax treatment of utility tokens, not the nature of the tokens themselves.

A rough framework of potential tax treatments might be mapped out based on the class of digital token, the type of tax in question and the common taxable events that might occur. Section D of this article lists the key features of the three classes of digital tokens and how they might commonly be used in practice. Section E considers the potential tax treatments that might arise from common taxable events. These events are divided into three main stages of the life-cycle of digital tokens: creation, transfer and disposal. These broad categories can be further subdivided into common tax events. Digital tokens are commonly created through mining, forging, and issue and purchase. Transfers typically occur where a token is exchanged for goods and services, other tokens, or fiat currency. Finally, digital tokens are commonly

¹ This does depend on the tax in question. Income tax tends to place a lot less emphasis on the asset (or service provided) in question relative to Goods and Services Tax (“GST”), stamp duties and property taxes. But generally, all taxes take into account the surrounding circumstances, making a generalisation of the tax treatment solely based on the asset in question untenable.

² “Mining” will be explained in Section E of this article.

disposed of through redemption, token burning and loss. Due to space constraints, this article largely focuses on the two taxes with arguably the largest significance: income tax and GST/VAT.

B. Background to the Taxation of Digital Tokens

The Misconception of a Single Monolithic Asset Class Exempt from Existing Legal Rules

Digital tokens are digital financial assets based on distributed ledger technology.³ As their use has become more widespread, numerous tax authorities have provided guidance on their tax treatment,⁴ whilst stepping up enforcement activities.⁵ In the early days of the adoption of digital tokens in commerce, the dominance of certain major payment tokens (cryptocurrencies) such as Bitcoin in the public's consciousness meant that there was a tendency to treat digital tokens as a single monolithic class, effectively synonymous with cryptocurrencies.⁶ Some misguided narratives (probably tempered with some degree of wishful thinking) started to emerge that digital tokens were somehow "different" and not subject to general legal rules. This was particularly clear in the context of securities regulation, where regulators stepped in quickly to debunk the rather self-serving and not uncommon assertion that an Initial Coin Offering ("ICO") should escape regulation since it was offering "digital tokens" and not securities, almost as if they were mutually exclusive categories.⁷ Similar troubling narratives emerged in the field of tax law, resulting in the need for the abovementioned guidance from tax authorities to make it clear to taxpayers that digital token transactions were not exempt from existing tax rules.

The Trichotomous Division of Digital Tokens in Securities Regulation

One of the first attempts to organise and structure the different varieties of digital tokens came in the form of the now widely-adopted classification of the Swiss Financial Market Supervisory Authority ("FINMA").⁸ By dividing digital tokens into payment, utility and security tokens,

³ Organisation for Economic Co-operation and Development ("OECD"), *Taxing Virtual Currencies: An Overview of Tax Treatments and Emerging Tax Policy Issues* (2020), 10

⁴ OECD, n 3, 8; Australian Taxation Office ("ATO"), "Tax Treatment of Cryptocurrencies", <https://www.ato.gov.au/general/gen/tax-treatment-of-crypto-currencies-in-australia---specifically-bitcoin/>; New Zealand Inland Revenue Department ("NZIRD"), "Cryptoassets", <https://www.ird.govt.nz/cryptoassets>.

⁵ Lasker P, *The Taxman is After Your Bitcoin Profits – Though the Law is a Grey Area* (ABC Australia), <https://www.abc.net.au/news/2018-01-30/bitcoin-cryptocurrency-tax-avoidance-profits/9374224>; IT Brief New Zealand, *Got Crypto? Pay Tax – A Quick Look at IR's New Crypto-asset Guidance*, <https://itbrief.co.nz/story/got-crypto-pay-tax-a-quick-look-at-ir-s-new-crypto-asset-guidance>.

⁶ Dier-Scalise C, *ACCOINTING.com's Tracking Tools Aim To Change The Discourse In The Crypto Market* (Benzinga), <https://www.benzinga.com/markets/cryptocurrency/21/03/20104778/accounting-coms-tracking-tools-aim-to-change-the-discourse-in-the-crypto-market>.

⁷ Rooney K, *SEC Chief Says Agency Won't Change Securities Laws to Cater to Cryptocurrencies* (CNBC), <https://www.cnbc.com/amp/2018/06/06/sec-chairman-clayton-says-agency-wont-change-definition-of-a-security.html?>

⁸ FINMA, Press release: FINMA publishes ICO guidelines (16 February 2018), 2.

the FINMA made it clear that digital tokens were to be assessed based on their objective economic substance and subjected to existing legal regulations accordingly. This division was driven by the need to fit tokens into existing securities regulation approaches, which differed based on the nature of the financial products offered. There is therefore no conceptual basis for directly transplanting this approach into tax law.

Nevertheless, the FINMA approach has been influential in tax law, which may be explicable on the basis of a “first-mover advantage”, providing a much-needed way of structuring digital token transactions, even if not perfect for the purposes of tax law. But the FINMA approach also appears to provide some kind of utility to tax practitioners in conceptualising the area. The trichotomous division does map quite neatly onto certain areas of tax law. For example, the idea that security tokens are generally exempted from GST/VAT stems from the fact that many of them might be argued to constitute financial supplies, which are generally exempted from GST/VAT. Similarly, the idea that the exchange of payment tokens for fiat currency should generally be exempted from GST/VAT stems from the fact that they are largely analogous to foreign currencies (even though not fiat currency), which would generally be exempt from GST/VAT in such circumstances as well.

That said, the fact that these three classes map neatly onto certain areas of tax law would appear to be purely coincidental, since the rationale for dividing them as such was based in securities regulation and not tax law. As such, tax law should not blindly follow this classification, and instead be ready to depart from it where appropriate. For example, tax law might be eventually recognise additional classes of tokens. A new development which potentially challenges the current trichotomous classification is that of certain forms of non-fungible tokens (“NFTs”), which are unique digital tokens that are not interchangeable with each other. While NFTs can be used to represent ownership of another asset (and thus, be considered to be a form of security token), they can also sometimes have value in and of themselves, as in the case of a piece of unique digital artwork (which is the asset itself).⁹ Viewed in this sense, some forms of NFTs may not fit neatly into the trichotomous classification as they are not payment, utility or security tokens, but something else entirely. The three classes might also be more appropriately further subdivided. For example, it might be more appropriate for income tax purposes to further subdivide security tokens into equity security tokens and debt security tokens. Similarly it might be appropriate for stamp duty purposes to divide security tokens along the lines of whether the underlying securitised asset includes real property.

The Non-Mutually Exclusive Nature of the Different Classes of Digital Tokens

The classification of digital tokens is based on the underlying economic function of the tokens, which exist on an overlapping spectrum and are not mutually exclusive, meaning that some

⁹ Ethereum, “Non-Fungible Tokens (NFT)”, <https://ethereum.org/en/nft/>.

tokens may be hybrids.¹⁰ In some cases, the character of a token might also change over the course of its lifetime (akin to how convertible securities may change).¹¹ Hybrid tokens may be subject to more than one regulatory regime.¹² For example, a company might launch an ICO that offers tokens that could be exchanged for a product or service, but also confer voting rights on the holder as to the management of the company. Such a token might be classified as both a utility and security token. However, when ICOs first started being launched, several firms sought legal opinions to declare that their ICOs were of utility tokens and thus “exempt” from securities regulation. Regulators soon put a stop to such arguments, making it clear that hybrid tokens could exist.

C. Relevance of the Nature of the Asset to its Tax Treatment

As submitted above, the fact that an asset is a digital token does not generally change its tax treatment in and of itself, which must be determined through the application of orthodox tax principles, based on the surrounding circumstances of the relevant taxable event. But there are several relatively rare situations where the nature of the asset does make a difference. The most obvious example is that of situations where there is legislation that specifically singles out particular digital tokens for exceptional tax treatment.¹³ Also, within the European Union, due to the decision in *Skatteverket v Hedqvist*, cryptocurrency transactions are largely treated as akin to fiat currencies for GST/VAT purposes.¹⁴

Another uncommon situation is that of the determination of business or trade income, where the nature of the asset may be one of the elements in the test for whether a business or trade is being carried on. Ooi has argued that it may be possible to make out a *prima facie* case that activities dealing with cryptocurrencies (and possibly, digital tokens, more generally) are in the nature of gambling activities.¹⁵ As courts in several jurisdictions have generally been reluctant to accept that gambling activities can constitute a trade or business, the fact that the assets in question are digital tokens may substantively affect the tax treatment of transactions involving them.¹⁶

¹⁰ Gurrea-Martinez A and Remolina N, “The Law and Finance of Initial Coin Offerings” in Brummer C (ed), *Cryptoassets: Legal, Regulatory, and Monetary Perspectives* (OUP 2019), 120.

¹¹ OECD, n 3, 12

¹² Waerzeggers C and Aw I, “Difficulties in Achieving Neutrality and Other Challenges in Taxing Cryptoassets” in Brummer, C (ed), *Cryptoassets: Legal, Regulatory, and Monetary Perspectives* (OUP 2019), 220.

¹³ OECD, n 3, 16. For example, Australia and Singapore have exempted Payment Tokens from GST/VAT (Australian Treasury Laws Amendment (2017 Measures No 6) Act 2017 (“**ATLA 2017**”), Schedule 1; and Inland Revenue Authority of Singapore (“**IRAS**”), IRAS e-Tax Guide: GST: Digital Payment Tokens (19 November 2019) respectively). See also, Julie Cassidy *et al*, “A Toss of a (Bit)coin: The Uncertain Nature of the Legal Status of Cryptocurrencies” (2020) 17(2) *eJournal of Tax Research* 168.

¹⁴ (*Case C-264/14*) [2015] BVC 34, see OECD, n 3, 36.

¹⁵ Ooi V, “The Taxation of Cryptocurrency Gains” (2021) 75(7) *Bulletin for International Taxation* 323-333.

¹⁶ Ooi, n 15.

D. The Trichotomous Classification of Digital Tokens

The three classes of digital tokens have various general features that members of each class share.

Payment Tokens

Payment tokens are used as mediums of exchange but do not constitute fiat currency or legal tender in almost all jurisdictions.¹⁷ In many jurisdictions, payment tokens are regarded as intangible property.¹⁸ Where used as payment for goods or services, the transaction is generally characterised as barter trade and taxed accordingly for the purposes of income tax.

As for GST/VAT, the European Union treats payment tokens as akin to fiat currencies and thus supplies of payment tokens in exchange for goods or services (or other payment tokens) are generally considered to be non-taxable events for GST/VAT purposes.¹⁹ Both Australia and Singapore initially took the position that following first principles, transactions using payment tokens were akin to barter trade for GST/VAT purposes and thus these taxes were payable. These positions were soon reversed by statute and supplies of payment tokens are no longer considered to be taxable events for GST/VAT purposes in these countries.²⁰

Utility Tokens

Utility tokens oblige the issuer to provide goods or services when redeemed and are thus akin to vouchers. For income tax purposes, proceeds from the issuance of a utility token constitute consideration for the payment of the service, and will generally be taken to be deferred revenue and taxable.²¹ Depending on the precise tax rules in the jurisdiction in question, the revenue may be recognised at different points, including sometimes only when the performance obligation is fulfilled (e.g. services are performed, goods delivered).²²

For GST/VAT purposes, the sale and issuance of utility tokens will generally be taken to be akin to that of vouchers, with similar tax treatment accorded.²³ Again, the taxing point

¹⁷ IRAS, IRAS e-Tax Guide: Income Tax Treatment of Digital Tokens (17 April 2020), para 5.1. The sole exception appears to be El Salvador, which passed a law on 8 June 2021 to recognise Bitcoins as legal tender (see BBC, “Bitcoin: El Salvador Makes Cryptocurrency Legal Tender”, <https://www.bbc.com/news/world-latin-america-57398274>).

¹⁸ IRAS (Income Tax), n 17, para 2.3.

¹⁹ OECD, n 3, 37. Also see *Skatteverket v Hedqvist (Case C-264/14)* [2015] BVC 34.

²⁰ ATLA 2017, Schedule 1; IRAS (GST), n 13, para 6.2. Also see, generally, Fairpo A, “Taxation of Cryptocurrencies”, in Fox D and Green S (eds.) *Cryptocurrencies in Public and Private Law* (OUP) (2019) at 10.65.

²¹ IRAS (Income Tax), n 17, para 8.2.

²² IRAS (Income Tax), n 17, p 14.

²³ IRAS (GST), n 13, para 5.11

will differ depending on the precise tax rules in the relevant jurisdiction, with some kinds of vouchers subject to GST/VAT immediately upon sale and others only upon redemption.

Security Tokens

Security tokens are digital representations of physical or financial assets, and may be viewed as analogous to traditional forms of securities.²⁴ Depending on the types of rights held by the owner, security tokens may broadly be further sub-divided into equity, debt or hybrid instruments. For income tax purposes, proceeds from the issuance of a security token are generally capital in nature, since they are akin to proceeds from the issuance of either debt or equity, and hence are non-taxable.²⁵

For GST/VAT purposes, in many jurisdictions, traditional securities (falling under the category of some kind of “financial supplies/services”) would typically be exempt from GST/VAT.²⁶ Security tokens, being akin to such traditional securities are also likely to be generally exempt in the same way.²⁷

E. Similarities in the Taxation of Common Taxable Events

Despite the considerable variation in potential digital token transactions, there are a range of common taxable events that can be organised according to the three main stages of the life-cycle of digital tokens: creation, transfer and disposal. Digital tokens are commonly created through mining, forging, and issue and purchase. They are commonly transferred through exchange for goods and services, other tokens, or fiat currency. Digital tokens are also commonly disposed of through redemption, token burning and loss. As noted above, there tends to be some correlation between the class of digital token in question and the tax treatment under these common taxable events.

Creation

Creation events may be generally divided into situations where tokens are created and issued in a centralised or decentralised manner. In cases of mining and forging, a decentralised algorithm awards tokens to the miners and forgers who perform certain tasks. Unlike in cases of issue and purchase, there is no single individual who is tasked with creating the tokens. Tax issues arising from the creation of digital tokens thus tend to centre around the issuing

²⁴ Waerzeggers and Aw, n 12, 220.

²⁵ IRAS (Income Tax), n 17, para 8.2; Reeves P and Willcock G, “Australia” in *Blockchain & Cryptocurrency Regulation* (1st Ed) (GLI) (2019), at p 202.

²⁶ Waerzeggers and Aw, n 12, 226

²⁷ Singapore Goods and Services Tax Act (Cap 117A, 2005 Rev Ed) (“SGSTA”), Fourth Schedule, Part I.

individual in the case of centralised processes, and around the recipient individuals in the case of decentralised processes.

Mining

Mining refers to the process in some distributed-ledger protocols by which transactions of digital tokens are verified and are added to the blockchain-based ledger recording the transactions. This is done through the solving of mathematical equations that are difficult to solve but whose solutions can be easily checked (the “proof-of work method”).²⁸ Miners make calculations to verify the transactions and share their results with the network, with the fastest correct miner receiving tokens.²⁹ Essentially, mining is a mechanism put in place to “pay for” the running of the distributed ledger system and the “costs” are spread amongst the existing owners of the digital token as an increased supply of the token leads to a devaluation of the existing tokens, in a manner akin to inflation. Mining is most commonly associated with payment tokens, which are most likely to be issued in a decentralised manner.

As mining is a decentralised process by which tokens are created, there is no single individual who issues the token, making it difficult to identify a taxable person as the issuer for the purposes of income tax. Rather, the focus is likely to be on the miners as recipients of the tokens, having been issued such tokens in consideration of them providing the service of mining to the network. Conceptualised as such, there seems to be little reason why tokens received through mining should not be considered to be income. However, many countries (including Australia and Singapore) have taken a more generous position, holding that such receipts should only be taxed as income where the mining takes place for business (or habitual) rather than personal (or occasional) purposes.³⁰

For the purposes of GST/VAT, the receipt of new digital tokens via mining is not a taxable supply in many jurisdictions (such as the UK and Singapore).³¹ In Australia, this is determined based on a few factors, such as whether the miner is registered for GST; and whether the supply is made in the course of the miner’s enterprise.³² However, it is noted that in Australia, should the digital token involved be considered as a “digital currency” as defined in its GST legislation, the supply of such tokens would not be subject to any GST, since it will be considered as an input taxed financial supply.³³ Given that it is payment tokens that are the most likely to be created through mining, it would appear that in Australia, GST/VAT issues are unlikely to be a big concern for miners.

²⁸ OECD, n 3, 11.

²⁹ OECD, n 3, 11.

³⁰ OECD, n 3, 24, 26; IRAS (Income Tax), n 17, p 10

³¹ OECD, n 3, 39; Waerzeggers and Aw, n 12, 232; IRAS (GST), n 13, para 10.1.

³² Reeves and Willcock, n 25, p 205.

³³ Reeves and Willcock, n 25, p 205.

Forging

Digital tokens may also be created through forging, which issues tokens to reward forgers for verifying transactions in the blockchain (through a “proof-of-stake” system).³⁴ In this sense, it is quite similar to mining. However, no mathematical equations are used in the verification process,³⁵ but a forger “stakes” existing tokens which will be forfeited if the forger verifies a fraudulent transaction.³⁶ This mechanism potentially raises very distinct tax issues. As the ability to participate in the forging process depends on the forger staking some tokens, which may be forfeited if the transaction verified turns out to be fraudulent, the tokens received can be viewed as a return on the underlying assets.³⁷ Such is the position in Australia, where the ATO draws a distinction between digital tokens obtained by mining and forging.³⁸ Tokens obtained in the former category are treated as ordinary income whereas those in the latter category are taxed for the first time upon disposal.³⁹

Issue and Purchase

In contrast to mining and forging, which are likely to be used largely for payment tokens (and not so much for the other kinds of tokens), issue and purchase is a common form of token creation for all three classes of digital tokens. As a centralised process of token-creation, the tax issues here centre around the identifiable issuer of the tokens, rather than the purchasers. The purchase of any class of digital token tends to be a non-tax event for the purchaser for income tax, though GST/VAT will often be payable for utility tokens.

For the issuer, the class of token being issued correlates with the income tax treatment of the proceeds received. For payment tokens, income tax will likely be payable on such receipts, generally classified as income from the carrying on of a business or trade.⁴⁰ For utility tokens, as discussed above, their issuance is likely to be seen as akin to the issuance of vouchers and thus, any resultant receipts are likely to be taxable as income. For security tokens, as discussed above, since they are akin to debt or equity securities, proceeds from their issuance are likely to be non-taxable for income tax purposes.

As far as GST/VAT is concerned, conceptually, the issuance of payment tokens should be a chargeable supply. However, several jurisdictions such as Australia and Singapore have expressly legislated that such supplies should be exempted from GST/VAT.⁴¹ As noted above, utility tokens are likely to have the same GST/VAT treatment as vouchers. Issues of security

³⁴ OECD, n 3, 11

³⁵ OECD, n 3, 11

³⁶ Waerzeggers and Aw, n 12, 230

³⁷ OECD, n 3, 51

³⁸ ATO, “Transacting with cryptocurrency”, <https://www.ato.gov.au/general/gen/tax-treatment-of-cryptocurrencies-in-australia---specifically-bitcoin/?anchor=Transactingwithcryptocurrency>.

³⁹ OECD, n 3, 52

⁴⁰ IRAS (Income Tax), n 17, p 14

⁴¹ Reeves and Willcock, n 25, p 205; SGSTA, Fourth Schedule, Part I.

tokens are likely to be exempt from GST/VAT on the basis that they fall under the category of some kind of “financial supplies/services”.⁴²

Transfer

Digital tokens are often exchanged for goods and services, other tokens and fiat currency. Regardless of what is received in exchange for the digital token, the tax treatment for tokens in the same class tends to be broadly similar (though the valuation methods applied may differ). Tax treatments largely differ based on the class of token being exchanged.

Income Tax

Payment tokens tend to have the broadest range of potential exchanges. When exchanged in any of the three abovementioned situations, there can be considered to be a disposal of the payment token, giving rise to a taxable event in a significant majority of jurisdictions.⁴³ Conceptually, there exists no difference in the tax treatment for income tax purposes (save for issues of valuation) and the exchange is treated as a barter exchange.⁴⁴ The exact tax treatment will then be determined by the surrounding circumstances of the transaction. For example, it might be necessary to apply a “trade income” or “business income” test if the taxpayer had acquired or disposed of the token as part of a trade or business.⁴⁵

Utility tokens are broadly subject to the same tax treatment, but it is quite rare for utility tokens to be exchanged for goods and services, since they may not readily be accepted as a medium of exchange.⁴⁶ Utility tokens may be exchanged for other tokens or fiat currency in the same way that vouchers may be so exchanged (provided no contractual terms prohibit their free transfer). As with payment tokens, regard must be had to the surrounding circumstances of such transactions.

Security tokens are also broadly subject to the same tax treatment, but it is also quite rare for them to be exchanged for goods or services for the same reason as for utility tokens. Security tokens may be exchanged for other tokens or fiat currency in the same way that securities may be so exchanged, and once again regard must be had to the surrounding circumstances.

⁴² Waerzeggers and Aw, n 12, 226; SGSTA, Fourth Schedule, Part I.

⁴³ OECD, n 3, 30

⁴⁴ NZIRD, “Questions & Answers: Cryptocurrency and Tax”, <https://perma.cc/N442-TWYV>; IRAS (Income Tax), n 17, para 5.1.

⁴⁵ Ooi, n 15; ATO, n 4; IRAS (Income Tax), n 17, p 13.

⁴⁶ Note the conceptual difference with “redemption”, discussed in the next sub-section, where the redeemed token is taken out of circulation.

GST/VAT

The GST/VAT treatment of the transfer of digital tokens is heavily correlated with the class of token in question. Broadly speaking, unless a specific exemption exists for certain classes of digital tokens, the default position is that the exchange of digital tokens is a form of barter trade, where GST/VAT will need to be accounted for both in respect of the digital token being supplied and the goods, services or digital tokens being received in exchange. Obviously no GST/VAT will be chargeable on the fiat currency being exchanged.

The transfer of digital tokens will largely be subject to the same GST/VAT tax consequences as for the creation of tokens (and for largely the same reasons). As such, while the default position is that they are a form of barter trade and should be chargeable accordingly, the transfer of payment tokens has been exempted from GST/VAT in some jurisdictions and the transfer of security tokens is also generally exempt. In many cases, the total value of utility tokens being exchanged will often not cross the GST/VAT registration threshold of the supplier, meaning that such exchanges may not often be relevant for GST/VAT purposes.

Disposal

There are several ways in which digital tokens may be (effectively) permanently taken out of circulation, for example, redemption, token burning and loss. These ways are conceptually diverse. Redemption involves tokens which are intended to be disposed of in this way from the beginning. Token burning is a conscious decision made to influence the value of the remaining tokens. Loss is (almost always) unintentional and only “effectively permanent”, since there remains the remote possibility that the tokens could be retrieved in the future as technology advances.

Redemption

Digital tokens are generally designed to exist indefinitely, with the main exception being those intended to be redeemed at some point such as Liquidity Pool Tokens.⁴⁷ Utility tokens make up a considerable majority of such tokens, since they oblige the issuer to provide some agreed-upon goods or services in the future, when the token is redeemed. It is possible, but perhaps somewhat rare at the moment for an issuer of security tokens to provide that the underlying securitised asset might be redeemed at some point. It is similarly theoretically possible for a

⁴⁷ Briefly, liquidity pools are groups of digital tokens which are governed by smart contracts. They form an integral part of Decentralised Financing (“DeFi”). The pools are used to generate liquidity in the market for the particular kinds of digital tokens which are in the pool, by effectively performing a market-making function. In exchange for providing this liquidity by contributing digital tokens to the pool, the owners of the tokens are granted Liquidity Pool Tokens, which enables them to collect a proportion of the “transaction fees” imposed by the pool for its market-making function. An owner wishing to exit the pool may redeem the Liquidity Pool Tokens and get back the tokens which it originally contributed, plus its share of the “transaction fees”.

payment token to be made redeemable for fiat currency at some point. Arguably the tax treatment for redemption of payment and security tokens should be the same as for the exchange of those tokens for the relevant goods and services, other tokens, or fiat currency received.

Token Burning

The somewhat unusual practice of token burning is akin to share buybacks. Token issuers may acquire their tokens from the open market and permanently take them out of circulation, typically as a means to return value to investors without the payment of dividends. With a decrease in the supply of tokens in the market, this theoretically increases the value of the remaining tokens in circulation.⁴⁸ Token burning is most likely to occur for security tokens rather than payment or utility tokens, though the theoretical possibility for it to occur for the latter two remains.

The income tax consequences of token burning for holders of the remaining tokens (whatever the class of token) should be fairly uniform. In the absence of any specific legislation, token burning should not be a taxable event in itself, though it might precipitate a rise in the value of the remaining tokens in circulation, which may eventually be taxed as income, whether through realisation or on an accruals basis.

However, it should be noted that things may be a little more complicated for jurisdictions that possess a specific legislative regime for share buybacks such as Australia.⁴⁹ In Australia for instance, capital gains tax is imposed on share buybacks.⁵⁰ In Australia, the market value of the asset at the time that the share was bought back would thus be used in the charging of capital gains tax.⁵¹ This appears to relate specifically to shares⁵² and not digital tokens. It is thus arguable that token burning may not be subject to the same tax treatment.

It should also be noted that in the odd case where no consideration is received by issuer in exchange for the shares which are bought back, the market value substitution rule may apply. This deems the taxpayer as having received the market value of the asset for capital gains tax purposes.⁵³ Applied in the context of token burning, the rule would make the practice far more uneconomic.

For the token issuer who engages in token burning, there are unlikely to be any GST/VAT implications, since it can hardly be said that the destruction of one's own assets is a "supply" made to anyone. In the case of burning utility and security tokens, the income tax

⁴⁸ Waerzeggers and Aw, n 12, 239-240

⁴⁹ ATO, "Share buy-backs", <https://www.ato.gov.au/Individuals/Capital-gains-tax/Shares-and-similar-investments/Share-buy-backs>.

⁵⁰ ATO, "Share buy-backs", <https://www.ato.gov.au/Individuals/Capital-gains-tax/Shares-and-similar-investments/Share-buy-backs>.

⁵¹ ATO, "Guide to Capital Gains Tax", <https://www.ato.gov.au/Forms/Guide-to-capital-gains-tax-2021/?page=7>.

⁵² See The Australian Income Tax Assessment Act 1936, Division 16K.

⁵³ See The Australian Income Tax Assessment Act 1997, Sect 116.30.

treatment should be analogous to that of a refund made on a voucher and a share buyback respectively. The major uncertainty lies as to the potential income tax treatment of the burning of payment tokens. The destruction of fiat currency is widely considered to be illegal in a large number of jurisdictions and it is difficult to analogise accordingly to payment tokens. Theoretically, one might consider that the correct tax treatment might be to take a look at the net gain or loss to the token issuer burning the tokens, based on the value of the tokens destroyed and the increase in the value of the remaining tokens held. Burning payment tokens is *prima facie* economically irrational since unless the issuer holds 100% of all the tokens, it will theoretically always suffer a net loss.

Loss

Digital tokens are said to be “lost” when the private key to the wallet holding the tokens is no longer available, making it effectively impossible to access the wallet and “use” the tokens within. This can occur in situations where a private key to the cryptocurrency is misplaced or forgotten, or in the case of inheritance, where the key to the wallet is not shared.⁵⁴ There appears to be wide variation in the approach taken by different jurisdictions. For example, while Australia views the loss of a cryptocurrency as a capital loss, the United Kingdom does not consider the loss of a private key as disposal of the asset.⁵⁵ The theoretical difficulty here is that while the owner of the “lost” tokens might find it effectively impossible to actually use the tokens, they have not in fact been modified in any way. There remains a theoretical possibility that as technology develops, it might become possible to “crack open” the wallet and once again use the tokens. There might also be significant evidential difficulties in proving that the tokens have in fact been “lost”, since a taxpayer asserting it would effectively have to prove a negative: that there is no way to access the wallet.

F. Conclusion

The wide variety of uses which digital tokens can be put to makes it important to have some sort of framework with which to analyse them, yet makes the conceptualisation of such a framework particularly difficult. Early attempts to rationalise their tax treatment often resulted in rather simplistic misconceptions that did not accurately describe the field. This article has sought to establish five main propositions about the taxation of digital tokens. Essentially, they are not a monolithic asset class attracting uniform tax treatment. Nor is it possible to definitively determine the tax treatment of a transaction merely by looking at the class of digital token involved. Instead, one must always look at the surrounding circumstances of each transaction, in accordance with orthodox tax principles. That said, some patterns in the tax treatment of the different classes of digital tokens may be observed across various common taxable events. These patterns are not a substitute for a comprehensive application of existing

⁵⁴ OECD, n 3, 31

⁵⁵ OECD, n 3, 31

tax rules, but may provide a useful framework for an introductory understanding of the taxation of digital tokens.

The patterns generally arise because digital tokens tend to follow a broadly similar ‘life-cycle’, in terms of the ways in which they are created, transferred and disposed of. Where existing tax provisions are broadly drafted to generally catch most transactions of a particular nature, the tax treatment of digital tokens is likely to follow the existing orthodox tax treatment and there are likely to be clear patterns. On the other hand, the more specific existing tax provisions are with respect to the types of assets and asset classes that trigger the application of these provisions, the less easy it will be to predict the tax treatment of digital tokens. To reiterate two examples discussed above, the market value substitution rule is very broadly drafted to catch most assets and most likely applicable to the context of digital tokens.⁵⁶ On the other hand, the capital gains tax provisions on share buybacks specifically refers to shares⁵⁷ and thus it may not be assumed that they will similarly apply to digital tokens, no matter how analogous particular security tokens might be to shares.

In considering whether transactions involving digital tokens should be subject to orthodox tax rules, which in turn affects the utility of spotting patterns in their tax treatment, there are two clear extremes. If the relevant statutory provision refers to a specific asset or asset class that does not include digital tokens, then that provision cannot apply to digital tokens. The converse also applies, in a case where the statutory provision specifically refers to digital tokens. It is anticipated that moving forward, the main difficulties with respect to the taxation of digital tokens will lie in interpreting statutory provisions that lie in the middle, in that their scope is determined by a functional definition, which sets out the characteristics of the assets that they are meant to catch, but may not expressly list these assets. The challenge will then be in determining whether particular kinds of digital tokens fall within the ambit of such statutory provisions. For example, if a provision is drafted to catch “assets which give voting rights or rights analogous to voting rights to the holder”, the fact that the asset in question is a security token would not be sufficient to determine its tax treatment and it would be necessary to look carefully at the particular characteristics of that asset.

⁵⁶ See The Australian Income Tax Assessment Act 1997, Sect 116.30.

⁵⁷ See The Australian Income Tax Assessment Act 1936, Division 16K.