

A toss of a (bit)coin: the uncertain nature of the legal status of cryptocurrencies

Julie Cassidy,* Man Hung Alvin Cheng,** Toan Le*** and Eva Huang****

Abstract

Regulating cryptocurrency is a difficult task for regulators. At present, there is no clear and authoritative definition of cryptocurrency, making it difficult for regulators to determine which aspects require regulation and, if so, how to control and monitor activities. Defining the legal nature of cryptocurrencies is important. At its most fundamental level the answer to these matters will determine the regulatory framework within which trading in cryptocurrencies may or may not occur. The government may simply prohibit trading in cryptocurrencies, even making such transactions illegal. Alternatively, trading may not only be legal, but facilitated by government concessions. A government may recognise cryptocurrencies as ‘currency’. It may be determined that transactions involving cryptocurrencies merely involve the sale of property, possibly akin to a financial product. This article discusses the different approaches to regulating cryptocurrency and the taxation implications in four Asian countries which account for a large proportion of cryptocurrency transactions.

Key words: cryptocurrency, taxation, blockchain technology, fintech regulation, digital economy

* Professor, Commercial Law Department, University of Auckland.

** Lecturer, Department of Finance and Accounting, University of Nottingham.

*** Lecturer, Department of Business Law and Taxation, Monash Business School, Monash University.

**** Lecturer, University of Sydney Business School; Research Affiliate, Cambridge Centre for Alternative Finance, the University of Cambridge Judge Business School.

1. INTRODUCTION

Fintech is becoming mainstream in facilitating transactions. Blockchain technology, from its humble beginning as a decentralised encrypted form of record keeping, has moved to the mainstream. The advent of cryptocurrencies as a result of blockchain technology is a more novel Fintech development. Based on similar technology, hundreds of cryptocurrencies are being created and traded. Bitcoins are by far the most popular cryptocurrency, but many others exist.¹ The popular ‘coins’ fluctuate dramatically in ‘prices’, where realised and unrealised gains are being made by coin-holders.²

The economic substance of cryptocurrencies gives them value, but to date the law has not conclusively defined this substance. The difficulty is that the transfer of value between the parties involves the transfer of a unique digital file that in itself has no intrinsic value.³ Thus regulating cryptocurrency is a difficult task for regulators across the globe. At present, there is no clear and authoritative definition of cryptocurrency, making it difficult for regulators to determine which aspects (if any) require regulation and, if so, how to control and monitor activities. This difficulty exists at two levels: initial coin offerings (ICOs) that brought the cryptocurrency into existence and trading in the cryptocurrencies themselves.

Defining the legal nature of cryptocurrencies and in turn ascertaining what gives them value is important for many reasons that must be addressed by each nation worldwide. At its most fundamental level the answer to these matters will determine the regulatory framework within which ICOs and trading in cryptocurrencies may or may not occur. A government may simply prohibit the issuing of ICOs and/or prohibit trading in cryptocurrencies. As discussed below, at one extreme China and Vietnam have chosen to make such transactions illegal. South Korea sits in the middle, prohibiting ICOs, but allowing for trading within a regulatory framework. At the other end of the spectrum ICOs and trading may not only be legal, but also facilitated by government concessions.

¹ As of October 2018, 2,076 cryptocurrencies were listed by Coin Market Cap. For further discussion of the role of Bitcoin as a cryptocurrency, see Evan Hewitt, “Bringing Continuity to Cryptocurrency: Commercial Law as a Guide to the Asset Categorization of Bitcoin” (2016) 39(2) *Seattle University Law Review* 619, 623. See further Garrick Hileman and Michel Rauchs, *Global Cryptocurrency Benchmarking Study* (Cambridge Centre for Alternative Finance, University of Cambridge, 2017); Esko Cate and Oliver Massmann, “Did the State Bank of Vietnam Just Turn its Back on the Future of Commerce?” Duane Morris Vietnam blog (11 December 2017), <https://blogs.duanemorris.com/vietnam/2017/12/11/vietnam-bitcoin-and-cryptocurrencies-did-the-state-bank-of-vietnam-just-turn-its-back-on-the-future-of-commerce> (accessed 26 January 2020).

² The value of Bitcoin increased by approximately 750 per cent between August 2016 and August 2017. As to the volatility of the cryptocurrency and the ‘bubble’ at times bursting, see Laura Davidson and Walter Block, “Bitcoin, the Regression Theorem, and the Emergence of New Medium of Exchange” (2015) 18(3) *Quarterly Journal of Austrian Economics* 311, 327; Adam Hartung, “A Bitcoin Is Worth \$4,000 – Why You Probably Should Not Own One”, *Forbes* (15 August 2015), <https://www.forbes.com/sites/adamhartung/2017/08/15/a-bitcoin-is-worth-4000-why-you-probably-should-not-own-one/#cccc4f63b082> (accessed 26 January 2020); Fitz Tepper, “The Reward for Mining Bitcoin Was Just Cut in Half”, *Tech Crunch* (10 July 2016), <https://techcrunch.com/2016/07/09/the-reward-for-mining-bitcoin-was-just-cut-in-half/> (accessed 26 January 2020); Jeff John Roberts, “5 Big Bitcoin Crashes: What We Learned”, *Fortune* (19 September 2017), <https://fortune.com/2017/09/18/bitcoin-crash-history/> (accessed 26 January 2020).

³ Ghassan Karame, Elli Androulaki and Srdjan Capkun, “Two Bitcoins at the Price of One? Double-Spending Attacks on Fast Payments in Bitcoin” (Proceedings of the Conference on Computer Security, 2012), <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.400.6276>.

The most important of these concessions is recognising cryptocurrencies as ‘a legal method of payment’, as in Japan,⁴ or a form of ‘digital currency’.⁵ It may be accorded the same status as foreign currency or, in extreme cases, equivalent with currency issued by the local sovereign state.⁶ To this end it is crucial from the outset to understand that that the term ‘cryptocurrency’ is in itself a misnomer. Whether it is to obtain the status of ‘currency’ will be determined by the government of the relevant jurisdiction.

If the government decides it is not ‘currency’, how will it be characterised? The government may, as in the case of Vietnam, determine that transactions involving cryptocurrencies merely involve the sale of property.⁷ Sales of cryptocurrencies have been suggested to be akin to the sale of shares or futures. In some cases the parallel that is drawn is oil⁸ or gold bullion.⁹ A further related issue is whether that characterisation will be embraced for all purposes, such as in Vietnam,¹⁰ or whether a government will be ‘schizophrenic’ and pick and choose which characterisation it will utilise for different purposes.¹¹

The above characterisation of cryptocurrencies has in turn significant ramifications to both the regulatory framework and taxation regime. As to the former, as already addressed above, at the macro level the government will need to decide whether ICOs and trading are allowed. If ICOs and trading are allowed then it must be determined if current laws will be applied or a new legal framework will be developed for cryptocurrency exchanges/business.¹² If the former, do existing consumer protection

⁴ Garrett Keirns, ‘Japan’s Bitcoin Law Goes into Effect Tomorrow’, *Coindesk* (31 March 2017), <https://www.coindesk.com/japan-bitcoin-law-effect-tomorrow> (accessed 26 January 2020).

⁵ This approach has also been adopted in Australia in regard to its goods and services tax. A new definition of digital currency was recently included in s 9-10(4) of the *A New Tax System (Goods and Services Tax) Act 1999*, effective from 1 July 2017. See further Julie Cassidy and Alvin Cheng, ‘A Toss of a (Bit)coin: The Uncertain Nature of the Legal Status of Cryptocurrencies’ (10th Queensland Tax Researchers Symposium, University of Queensland, 3 July 2019), https://law.uq.edu.au/files/47324/Cassidy_Bitcoin_Theme_1.pdf.

⁶ If China’s proposal to issue its own digital currency, discussed below, eventuates, it is assumed it will act as a digital form of the renminbi (RMB). At the time of writing, the Chinese government has not yet decided on the technology to build this digital currency.

⁷ Cate and Massmann, above n 1. This approach has also been adopted in New Zealand. See Inland Revenue Department, ‘Questions & Answers: Cryptocurrencies and Tax’ (April 2018) [4], <https://www.classic.ird.govt.nz/income-tax-individual/cryptocurrency-qa.html> (accessed 26 January 2020); Inland Revenue Department, *Income Tax – Salary and Wages Paid in Crypto-Assets*, Public Ruling BR Pub 19/01 (27 June 2019), <https://www.classic.ird.govt.nz/technical-tax/public-rulings/2019/public-ruling-1901.html>.

⁸ Cate and Massmann, above n 1.

⁹ The parallel to the sale of gold bullion, as adopted in New Zealand’s fiscal authority, the Inland Revenue Department, is important as it dictates that the cryptocurrency was bought for resale at a profit, not an income stream, such as dividends: Inland Revenue Department, ‘Questions & Answers: Cryptocurrencies and Tax’ (April 2018) [4].

¹⁰ This approach has also been adopted in New Zealand where cryptocurrencies are treated as a commodity for all purposes, whether that be, for example, income tax, goods and services tax and securities legislation. See Inland Revenue Department, ‘Questions & Answers: Cryptocurrencies and Tax’ (April 2018) [4]; Inland Revenue Department, *Income Tax – Salary and Wages Paid in Crypto-Assets*, BR Pub 19/01 (27 June 2019). See further Cassidy and Cheng, above n 5.

¹¹ This approach has also been adopted in Australia where cryptocurrencies are treated as a commodity for the purposes of income tax (specifically capital gains tax) and currency for goods and services tax. See Cassidy and Cheng, above n 5.

¹² For example, in June 2015 the New York State Department of Financial Services introduced a new regulatory regime to control the conduct of businesses using cryptocurrencies, known as ‘virtual currencies’; trading is regulated through the mandatory requirement to obtain a ‘BitLicense’. See

laws apply to both ICOs and trading? Are they a financial product subject to the control of relevant government securities regulators?¹³ Will existing money laundering rules apply in this context?¹⁴ A thread in the discussion below is governmental concerns for the use of cryptocurrencies in money laundering and their use in financing drugs, slavery and terrorist activities through sites such as the Silk Road, a virtual black market operating on the Deep Web.¹⁵

The above characterisation of cryptocurrencies has, in turn, significant ramifications to the tax treatment of gains and losses from such transactions. As property, not only will transactions made in the course of business be subject to tax as ordinary/business income, but non-business trading may also be subject to income/capital gains tax. The umbrella of transactions caught under the latter approach may include sales when the cryptocurrency was purchased within a business with the specific purpose of resale at a profit and mere *ad hoc* dabbling in such trading with a hope of a profit. Even in this context, the category of property into which cryptocurrencies are placed will be important. Are they a form of tangible or intangible property?¹⁶ As discussed above, are they a financial product? In the tax context, financial products are traditionally either exempt or 'zero rated' in terms of value added taxes (VAT)/goods and services taxes (GST). If the cryptocurrency is akin to currency it will not only be exempt from

Department of State, New York, *Title 23 Financial Services*, Part 200 Virtual Currencies (New York Codes, Rules and Regulations, 2015),

[https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I7444ce80169611e594630000845b8d3e&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I7444ce80169611e594630000845b8d3e&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)).

¹³ In New Zealand the securities regulatory authority, the Financial Markets Authority, has taken a strong stance on this matter and asserted that, no matter their configuration, cryptocurrencies are financial products that are regulated under its regime. See Financial Markets Authority, 'Commentary on ICOs and Cryptocurrencies', *Media Release MR No. 2017-46* (25 October 2017), <https://www.fma.govt.nz/news-and-resources/media-releases/fma-commentary-on-icos-and-cryptocurrencies/> (accessed 26 January 2020). By contrast, the position in Australia is uncertain. The Australian regulatory authority, the Australian Securities and Investments Commission (ASIC), when considering the relevant misleading and deceptive conduct provisions, at one stage determined that the offering of cryptocurrency was not the offering of a financial product: see <https://www.afp.gov.au/DocumentStore.ashx?id=4b6d105f-3e0a-4d52-aaab-1f35842ed5f1&subId=302297> (accessed 4 February 2020). However, more recently ASIC has suggested that cryptocurrency might be a financial product, in which case it would fall within its regulatory parameters: ASIC, 'Initial Coin Offerings and Cryptocurrency' (30 May 2019), <https://asic.gov.au/regulatory-resources/digital-transformation/initial-coin-offerings-and-crypto-assets/> (accessed 26 January 2020). See further Cassidy and Cheng, above n 5. See also Paul Latimer and Michael Duffy, 'Deconstructing Digital Currency and its Risks: Why ASIC Must Rise to the Regulatory Challenge' (2019) 47(1) *Federal Law Review* 121.

¹⁴ Australia recently amended its *Anti-Money Laundering and Counter-Terrorism Financing Act 2006* (Cth) by including 'digital exchange services' within the scope of the anti-money laundering rules: *Anti-Money Laundering and Counter-Terrorism Financing Amendment Act 2017* (Cth).

¹⁵ There is a wealth of literature on the Silk Road and its interrelationship with cryptocurrencies, in particular Bitcoin. Selected references include Aaron Lindquist, 'Funny Money: Why Bitcoin Does Not Warrant Increased Government Regulation' (2014) 1(1) *Journal of Global Justice and Public Policy* 79; Carmine DiPiero, 'Deciphering Cryptocurrency: Shining a Light on the Deep Dark Web' [2017] 3 *University of Illinois Law Review* 1267.

¹⁶ Cryptocurrencies have no physical form. Their foundation lies in the data strings that represent the coin: Corin Faife, 'Bitcoin Hash Functions Explained', *Coindesk* (19 February 2017), <https://www.coindesk.com/bitcoin-hash-functions-explained> (accessed 27 January 2020). As discussed below, Vietnam has formally recognised that trading in cryptocurrencies involves the trading of intangible assets: Tuoi Tre News, 'Bitcoin Regulation Headaches Reemerge in Vietnam', *Tuoi Tre News* (7 November 2017), <https://tuoitrenews.vn/news/business/20171107/bitcoin-regulation-headaches-reemerge-in-vietnam/42501.html> (accessed 27 January 2020).

VAT/GST but also exempt from taxes such as capital gains tax. As to which way a government might turn is anyone's guess: a toss of a (bit)coin!

While it has been noted above that these matters are global issues which each nation needs to address, the current analysis is confined to four key Asian nations, namely China, Vietnam, South Korea and Japan. These nations have been specifically selected as they represent the extreme positions that have been taken in this context. They effectively provide the 'book ends'; standards that other nations should utilise when determining how they stand on these issues. At one end of the spectrum, China has effectively banned trading in cryptocurrencies, particularly bitcoin. Vietnam has cautiously approached the issue, reflecting its infancy in the area of cryptocurrencies, by banning payment by cryptocurrencies.¹⁷ Payment by cryptocurrency is considered illegal.¹⁸ Nevertheless, the government has not totally banned cryptocurrency. It still recognises it as property, thus an asset that may be invested in and traded.¹⁹ Japan, by contrast, has taken the polaristic view that cryptocurrencies are 'currency' and sought to support and foster trading in them. South Korea had originally followed the lead of Japan, but recently has done a backflip in this regard. In a way the South Korean government has embraced a hybrid view. While no longer treating cryptocurrency as a 'currency', the government has asserted it will not ban trading in cryptocurrencies. It will, however, heavily regulate the market to prevent anonymous trades and trading by non-nationals.²⁰

This article begins with a brief introduction to the technology underpinning cryptocurrencies. This is important to understanding the very nature of cryptocurrencies and how transactions occur. It then considers the legal position(s) in China, Vietnam, Japan and South Korea, exploring in particular the tax implications of cryptocurrencies in these jurisdictions. While the focus is on tax implications, this is obviously very much dependent upon each nation's answers to the macro questions posed above.

2. A BRIEF TECHNICAL OUTLINE OF CRYPTOCURRENCIES

As noted in the introduction to this article, there is no clear and authoritative definition of cryptocurrency. The best way to understand cryptocurrency is to highlight its unique features. First, cryptocurrencies such as bitcoin are entirely digital. Cryptocurrencies have no physical form. As discussed below, their foundation lies in no more than the data strings that represent each 'coin'.²¹ A 64-character long identifier represents each coin.²² The final coin is a 'chain' of data strings as each transaction is recorded, adding

¹⁷ Charlie Osborne, 'Vietnam Bans Payments in Bitcoin and Other Cryptocurrencies', *Zdnet.com* (30 October 2017), <https://www.zdnet.com/article/vietnam-bans-payments-in-bitcoin-cryptocurrencies/> (accessed 27 January 2020).

¹⁸ Vietnam Law and Legal Forum, 'Legality of Cryptocurrencies in Vietnam Remains Unclear', *Vietnam Law and Legal Forum* (28 February 2018), <http://vietnamlawmagazine.vn/legality-of-cryptocurrencies-in-vietnam-remains-unclear-6170.html> ((accessed 13 October 2019).

¹⁹ Tuoi Tre News, above n 16.

²⁰ Financial Services Commission, Republic of Korea, 'Financial Measures to Curb Speculation in Cryptocurrency Speculation', *Press Release* (23 January 2018), <https://www.iosco.org/library/ico-statements/Korea%20-%20FSC%20-%2020180123%20-%20Financial%20Measures%20to%20Curb%20Speculation%20in%20Cryptocurrency%20Trading.pdf> (accessed 27 January 2020).

²¹ Faife, above n 16.

²² Andreas Antonopoulos, *Mastering Bitcoin: Programming the Open Blockchain* (O'Reilly Media Inc, 2017) 202.

a new link to the chain.²³ By contrast, other forms of electronic representations of money that are part of a jurisdiction's fiat currency supply may be involved in a digital environment, but they still have an underlying physical form, namely coins and notes.²⁴ The issuing and availability of these notes and coins are guaranteed by law.

Slattery suggests that a cryptocurrency is 'loosely defined as a decentralized system of exchange, or electronic money, which uses cryptography to provide the program's security'.²⁵ Thus a second feature of cryptocurrencies is the use of cryptography; hence the crypto prefix. Cryptocurrencies are 'an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party'.²⁶ Thus cryptocurrencies exist in a decentralised system without an intermediary party such as a bank. Each bitcoin is effectively the solution to a complex algorithm.²⁷ The solution to the encryption is partially in a public key and partially in the owner's private key.²⁸ These keys are both required to confirm the validity and ownership of a bitcoin.²⁹ In turn, a person must have the private key, like a pin code, to transfer a bitcoin. While the private key is needed as proof of ownership, a third feature of cryptocurrency is that ultimately the system is based on cryptographic proof alone which provides a system of, albeit recorded, anonymity.

Fourth, and arguably foremost, they are not issued by a sovereign nation, thereby having no connection to a government or State bank.³⁰ Instead each cryptocurrency is contained in its own network. Each time a person interacts with a cryptocurrency, their computer joins that network to record the transaction. More correctly, the transaction is recorded in a public ledger that is continuously 'talking' to all the computers in the network. Computers in the network are constantly updating the information and sealing off the recorded parts of the digital ledger by encrypting the record using the above discussed complex mathematical algorithm.³¹ To incentivise the recording and sealing off of a block in the ledger, computers are rewarded with new currency, known as 'native tokens'.³² In turn, the process of recording and sealing of blocks in the ledger is known as 'mining'.³³ The ledger is stored on every computer in the network rather than a central server.³⁴

²³ Thomas Slattery, 'Taking a Bit Out of Crime: Bitcoin and Cross-Border Tax Evasion' (2014) 39(2) *Brooklyn Journal of International Law* 829, 836.

²⁴ *Ibid* 833.

²⁵ *Ibid* 831. To this end some other terms commonly used may have the same meaning, including digital currency, virtual currency and digital token. There are some differences in their nature, but in the context of this article, they are grouped together as cryptocurrencies.

²⁶ Satoshi Nakamoto, 'Bitcoin: A Peer-to-Peer Electronic Cash System' (research paper, 2008), <https://bitcoin.org/en/bitcoin-paper>.

²⁷ Faife, above n 16.

²⁸ John McGinnis and Kyle Roche, 'Bitcoin: Order Without Law in the Digital Age' (2019) 94(4) *Indiana Law Journal* 1497, 1520.

²⁹ Adam Chodorow, 'Bitcoin and the Definition of Foreign Currency' (2016) 19(6) *Florida Tax Review* 365, 374.

³⁰ Cate and Massman, above n 1.

³¹ *Ibid*.

³² Hileman and Rauchs, above n 1, 13.

³³ Cate and Massmann, above n 1.

³⁴ *Ibid*.

This sealing off process of new transactions in turn relies on the information contained in previously sealed off blocks in the ledger.³⁵ Thus each block is a link which relies on earlier links. The linking of the blocks in this way provides the reason why the technology used by cryptocurrencies is known as ‘blockchain’.³⁶

In each cryptocurrency’s blockchain system, there are different players. These players are cryptocurrency exchanges, who facilitate the ‘purchase, sale and trading of cryptocurrencies’, digital wallets that store cryptocurrencies, payment systems that facilitate payments using cryptocurrencies (where the cryptocurrencies are used to purchase goods and services) and the above discussed miners who secure the public ledger.³⁷

Thus a fifth feature of cryptocurrencies is its foundation in blockchain. Definitions of what a blockchain is vary, but the general consensus is that it is a database or ledger of transactions which is distributed over a peer to peer network (such as the internet). It uses a variety of cryptographic techniques and validity rules to reach consensus between participants over changes to the shared database without needing to trust the integrity of any of the network participants.

There are many misconceptions about blockchain as a technology. These misconceptions include that blockchains are ‘trustless’, tamper-proof and 100 per cent secure. In regards to the notion of ‘trustless’ transactions, the misconception is that people transact without having to trust the party with whom they are transacting. This ‘trustless’ nature is guaranteed because every user of the blockchain keeps a record of the transaction and a consensus by the block is needed before the transaction goes through. This is true, but while there is no trusted third party (ie, a bank), a degree of trust will always be required in the underlying code and the cryptography applied in the algorithm.

With regard to the assertion that blockchain is tamper-proof, while transactions on the blockchain are more tamper resistant than mainstream transactions, transactions can be reversed if enough nodes on the network collude. Nodes are participants on the blockchain. Once more than 50 per cent of computational power on the blockchain collude, the blockchain can be tampered with. This is often described in the context of the ‘double spending problem’ as collusion could facilitate the bitcoin being traded/spent more than once.

With regard to being 100 per cent secure, while blockchains use cryptography, it is only as secure as how well the cryptographic ‘keys’ are managed. This factor is no different to centralised technologies; colluding actors can tamper with the records on the chain if they could solve the cryptography in the algorithm.

3. THE ROLE AND FUNCTIONS OF CRYPTOCURRENCIES ILLUSTRATED THROUGH MARKET ACTIVITIES

The initial aim of cryptocurrencies such as the bitcoin was to function as a ‘single digitalized currency, regulated not by a central authority, but rather by the individual

³⁵ Hileman and Rauchs, above n 1; Cate and Massmann, above n 1.

³⁶ Cate and Massmann, above n 1.

³⁷ Hileman and Rauchs, above n 1.

users who take part in the system’.³⁸ While people have used cryptocurrencies to pay for goods and services, the survey of market activities and international regulatory schemes by the Cambridge Centre for Alternative Finance (CCAF) at the University of Cambridge Judge Business School acts as a proxy to illustrate the current role and functions of cryptocurrencies. As discussed below, the outcomes of this study indicate that cryptocurrencies do not yet play the role of currency or money in the digital economy.

Theoretically, economists address the function of money, and a lawyer’s definition of currency will be captured by the economists’ characterisation of money.³⁹ For economists, money has three primary functions: a medium of exchange, a unit of account and a store of value.⁴⁰ For lawyers, currency includes the paper money and coins printed or minted according to law – for example, the *Regulation of the People's Republic of China on the Administration of Renminbi* (2000) in China. This section illustrates the roles and functions of cryptocurrencies by comparison with the three primary economic functions of money.

One of the best-known textbooks on the economics of money is that written by Mishkin.⁴¹ Mishkin clearly defines the three primary functions, to the extent that money and payment systems⁴² are different ideas in economics.

Money as a medium of exchange is much broader than the functions of a payment system. As a medium of exchange, the value of the medium, that is, the commodity that plays the role of money, should be able to function independently for the purposes of exchanging a good or service. Mishkin identified five criteria for a commodity to function effectively as money:⁴³

- ‘(1) it must be clearly standardized, making it simple to ascertain its value;
- (2) It must be widely accepted;
- (3) It must be divisible, so that it is easy to “make change”;
- (4) It must be easy to carry; and
- (5) It must not deteriorate quickly’.

Mishkin identifies the economic role of payment systems as ‘the method of conducting transactions in the economy’.⁴⁴ The historical evolution of payment systems shows how money as a medium of exchange functions through payment systems to facilitate transactions. Money is the underlying substance and payment systems provide the medium of exchange. Over time this has shifted from the days of commodity money in the form of gold or shells to governments issuing fiat money that are ‘decreed by governments as legal tender (meaning that legally it must be accepted as payment for

³⁸ Daniela Sonderegger, ‘A Regulatory and Economic Perplexity: Bitcoin Needs Just a Bit of Regulation’ (2015) 47 *Washington University Journal of Law and Policy* 175, 175-176.

³⁹ Frederic S Mishkin, *The Economics of Money, Banking and Financial Markets* (Pearson and Renmin University Press, 9th ed, 2013) 49.

⁴⁰ Ibid 50-52.

⁴¹ Ibid.

⁴² Ibid 50-52.

⁴³ Ibid 50-51.

⁴⁴ Ibid 52.

debts) but not convertible into coins or precious metal, and coins minted by governments according to law',⁴⁵ to cheques that document transfers of money between account holders, to electronic payment systems such as Paypal and Alipay, and e-money such as debit cards.

The next role money plays is as a unit of account, that 'it is used to measure value in the economy'.⁴⁶ This role allows goods and services to be priced in the economy, which is well beyond the role of a payment system.

The third role of money is as a store of value, that it is a 'repository of purchasing power over time',⁴⁷ allowing purchasing power to be 'saved from the time income is received until the time it is spent'. This additional function allows economic agents to delay exchange of goods and services until the purchase is necessary. Payment systems do not have this function. Cryptocurrencies cannot be used to measure value in the economy, because their own value is measured against the money, so they cannot act as a unit of account. Cryptocurrencies also do not store value to enable future purchasing power.

The cryptocurrency/cryptoasset ecosystem⁴⁸ captures several market activities relating to the trading of different types of assets or the facilitation of such trading, or the payment system role they play. Recent reports published by CCAF have documented these market activities, the functions the assets played and how global regulators have attempted to regulate cryptoassets.⁴⁹ As discussed below, Japan, being one of the jurisdictions that is friendly towards cryptocurrencies, provides clear guidance on the accepted functions of cryptocurrencies and the activities the jurisdiction accepts: that is, its role as a payment method⁵⁰ and that trade is not prevented.

As noted above, key actors in the cryptocurrency/cryptoasset ecosystem are cryptocurrency wallet users and operators, exchanges and their clients, payment companies and their clients, and miners. Cryptocurrency wallet users and operators, exchanges, payment companies and miners are themselves on the blockchains, clients of exchanges and payment companies may not necessarily be on the blockchain.⁵¹ Market activities are interactions between these main actors, where the exchange of

⁴⁵ Such as the *Regulation of the People's Republic of China on the Administration of Renminbi* (2000).

⁴⁶ Mishkin, above n 39, 51.

⁴⁷ Ibid 51.

⁴⁸ 'Ecosystem' here refers to the meaning given to it by systems theorists such as Luhmann in *Law as a Social System*. The ecosystem captures related activities: Niklas Luhmann, Klaus Ziegert, trans, Fatima Kastner and Richard Nobles R, eds, *Law as a Social System*, (tr. Klaus Ziegert, ed. Fatima Kastner, Richard Nobles, David Schiff and Rosamund Ziegert, Oxford University Press, 2004 [1993]). See also Peter Weill and Stephanie L. Woerner, 'Thriving in an Increasingly Digital Ecosystem' (2015) 56(4) *MIT Sloan Management Review* 27; Yogachandran Rahulamathavan, Raphael C-W Phan, Muttukrishnan Rajarajan, Sudip Misra and Ahmet Kondo, 'Privacy-preserving Blockchain based IoT Ecosystem using Attribute-based Encryption' (paper presented at the IEEE International Conference on Advanced Networks and Telecommunications Systems, Bhubaneswar, 17-20 December 2017), <https://ieeexplore.ieee.org/document/8384164>.

⁴⁹ Apolline Blandin, Ann Sofie Cloots, Hatim Hussain, Michel Rauchs, Rasheed Saleuddin, Jason Grant Allen, Bryan Zhang and Katherine Cloud, *Global Cryptoasset Regulatory Landscape Study* (Cambridge Centre for Alternative Finance, University of Cambridge Judge Business School, 2019).

⁵⁰ *Payment Services Act 2009* (Japan).

⁵¹ Hileman and Rauchs, above n 1. See especially Appendix B, at 105-106. Also see Figure 2, in Michel Rauchs, Apolline Blandin, Kristina Klein, Gina Pieters, Martino Recanatini and Bryan Zhang, *2nd Global Cryptoasset Benchmarking Study* (Cambridge Centre for Alternative Finance, University of Cambridge Judge Business School, 2018) 19.

cryptocurrencies occurs on exchanges in a similar fashion to commodity trades on commodity markets. Payment companies build platforms where the cryptocurrencies facilitate transactions. This facilitation corresponds to the economic role of payment systems explained by Mishkin,⁵² discussed above.

Returning to the indicia identified by Mishkin,⁵³ the market activities in the cryptocurrency ecosystem do not correspond to the functions of money. They do not conform to the criteria of mediums of exchange. As to Mishkin's first criteria, cryptocurrencies are not standardised. As noted above, there are many different cryptocurrencies. Industry reports on their aggregate market capitalisation;⁵⁴ which means that the value of each cryptocurrency fluctuates in the marketplace; thus the value is not simple to ascertain. As to the second criteria, as the analysis in this article shows, cryptocurrencies, in particular their use in purchase and sale agreements, are not widely accepted across the economies of the world. However, as to the final three criteria, it is possible for cryptocurrencies such as bitcoins to be divided, and their digital nature is easy to carry in digital wallets and since they do not come in a physical form, they do not deteriorate.

As noted above, there have been hidden economy activities facilitated by cryptocurrencies such as the bitcoin. The Silk Road on the Dark Web is a well-known example.⁵⁵ As a payment method, other forms of digital hidden economy activities may occur, where payment via cryptocurrencies facilitates tax evasion activities. An example of a digital hidden economy activity is online Daigou activities, where people solicit sales of goods via social media platforms such as Instagram, WeChat or Facebook. Sellers request payment via private means,⁵⁶ which could include via cryptocurrency payment platforms. There is a gap between solicitation of sales and actual payment. The common practice on social media platforms is that people do not use their full legal names as their account names. The sheer number of accounts means it is difficult to identify that a sale has been made. Once the sale has been made, it is difficult to link the payment to the solicitation of trade.

4. CHINA

In August 2009, the People's Bank of China issued the 'Administrative Measures for Electronic Currency Issuance and Clearing Measures: Exposure Draft (Exposure Draft)', which defined the term 'electronic currency' as 'the prepaid value stored on a client's electronic media for the purpose of payment'. This definition captures the 'store of value' criteria of money nominated by Mishkin,⁵⁷ discussed above. Article 3 of Chapter 1 of the Exposure Draft states that electronic currency can be divided into two categories: card-based electronic currency and network-based electronic currency. Card-based electronic currency is defined as a form of electronic currency stored in a computer-chip (ie, a debit card), while network-based electronic currency is defined as

⁵² Mishkin, above n 39, 50-52.

⁵³ Mishkin, above n 39, 50-51.

⁵⁴ Rauchs et al, above n 51, 10.

⁵⁵ As discussed in n 15 above and references there cited, there is a wealth of literature on the Silk Road and its interrelationship with cryptocurrencies, in particular bitcoin.

⁵⁶ See Xi Nan and Eva Huang, 'Another Place to Hide Business Activities? The Side Effects of Social Media Platforms' (Paper presented at the 31st Annual Conference of the Australasian Tax Teachers Association, Perth, 16-18 January 2019).

⁵⁷ Mishkin, above n 39, 50-52.

the electronic currency stored in software (ie, types of cryptocurrencies that have official backing). Article 3 also states that electronic currency excludes any prepaid currency used for inter-departmental payments. The definition is consistent with the one suggested by the Basel Committee on Banking Supervision.⁵⁸ This definition points towards China's stance on issuing its own digital currency, that it will act as a digital representation of the RMB, and serve the payment functions of the RMB in a digital environment. This definition is different from the functions of cryptocurrencies, as analysed above. Strictly speaking, China does not recognise the bitcoin as a digital currency via this definition.

The State Administration of Taxation (SAT) issued *Letter No. 818 [2008] of the State Administration of Taxation*, responding to a query submitted by the Beijing Municipal Bureau of Local Taxation regarding the collection of individual income tax on virtual currency.⁵⁹ Letter No. 818 confirms that any gain from the transfer of the virtual currency should be subject to the individual income tax. Under Article 2(9) of the *Individual Income Tax Law of the People's Republic of China* (2011 Amendment), the capital gains on the exchange of capital assets are subject to the individual income tax under the item of 'incomes generated from property transfer' and are generally taxable at a flat rate of 20 per cent. In the context of cryptocurrencies, the original value (or the cost base) includes the price and any taxes that the taxpayer initially paid for the virtual currency. If the taxpayer cannot provide the evidence regarding the original value of virtual currency being traded, then the taxation authority will determine the original value. As cryptocurrency was initially deemed to be a commodity in China, the trade between a legal and a digital currency for a consideration would at that time have also constituted a supply for VAT purposes, taxed at the standard rate of 15 per cent. However, as will be discussed below, this was all about to change.

On 5 December 2013, due to the rapid growth of bitcoin in China and the increasing risk associated with the bitcoin transactions, the People's Bank of China, the Ministry of Industry and Information Technology, the Securities Regulatory Commission, the China Banking Regulatory Commission and the China Insurance Regulatory Commission jointly issued the *Circular of the People's Bank of China, Ministry of Industry and Information Technology, China Banking Regulatory Commission, China Securities Regulatory Commission, and China Insurance Regulatory Commission on the Prevention of Risks from Bitcoin* ('2013 Circular') in order to more tightly regulate bitcoin. The 2013 Circular referred to bitcoin as a specific 'virtual commodity'. It states that bitcoin cannot be used as legal tender in China, prohibiting bitcoin from acting as a payment medium for the purchase of any goods or services. The Circular prohibits any financial institution and payment institution from conducting transactions associated with bitcoin. Added to this, it required that any trading platform must implement compulsory registration and be subject to anti-money laundering laws.⁶⁰ In

⁵⁸ L J Pu and Zhang, *Internet Financing (WangLuo JinRon Xue)* (Southwestern University of Finance and Economics Press, 2018); Z L Zhao, *Research on the Legal Issues of Virtual Currency* (MSc Dissertation, China University of Political Science and Law, 2010).

⁵⁹ The Chinese terms referring to digital and virtual currencies are used interchangeably in the Chinese language literature.

⁶⁰ People's Bank of China, *Notice on Prevention of Bitcoin Risks* (5 December 2013), <http://www.pbc.gov.cn/goutongjiaoliu/113456/113469/2804576/index.html> (accessed 27 January 2020).

order to prevent money laundering, China warned that it would take future action to further regulate the private ownership of bitcoin.⁶¹

In September 2017, the joint statement, *Announcement of the People's Bank of China, the Office of the Central Leading Group for Cyberspace Affairs, the Ministry of Industry and Information Technology and Other Departments on Preventing the Financing Risks of Initial Coin Offerings*,⁶² was issued banning any Initial Coin Offering (ICO) in China. It further reinforces that no organisation is allowed to engage in the exchange of virtual currency as legal tender. It prohibits various types of token financing activities and forced platforms which were involved in token financing or virtual currency trading to close down. More recently, in January 2018, the People's Bank of China issued an internal document among banks, prohibiting financial institutions from providing banking or funding facilities to any activity related to cryptocurrencies.⁶³

Thus, in China, cryptocurrency is not only no longer accepted as a means of payment, but is banned. However, it is important to note that while cryptocurrency exchanges have been banned, China has always taken an active position in blockchain technology research and the introduction of a central bank digital currency. It is predicted that China will be the first major country to launch a central bank digital currency.⁶⁴ The proposed digital currency will be set up as a two-tier structure which is referred to as the digital currency/electronic payment (DC/EP) system.⁶⁵ It is expected that this DC/EP will replace some of the 'M0' component of the central bank's money supply. China will also implement real-name verification and other measures to counter money laundering and tax evasion. Currently, the People Bank of China has stated China is ready to trial its new digital currency.⁶⁶ Thus the banning of bitcoin is seen as the first step in the Chinese government's issuing of its own digital currency, that may involve cryptography as part of the technology.

5. VIETNAM

Cryptocurrencies were introduced into Vietnam in 2013 when Bitcoin Vietnam, in collaboration with an Israeli company, 'Bit of Gold', first promoted bitcoins.⁶⁷ Despite its relatively late introduction into the Vietnamese economy, bitcoin and other digital

⁶¹ Matthew Sparkes, 'Bitcoin Plunges 29pc as China Bans Banks From Trade', *The Telegraph* (5 December 2013), <https://www.telegraph.co.uk/technology/news/10497146/Bitcoin-plunges-29pc-as-China-bans-banks-from-trade.html> (accessed 27 January 2020).

⁶² See <http://en.pkulaw.cn/display.aspx?cgid=64264ae40d2e078dbdfb&lib=law> (accessed 27 January 2020).

⁶³ Xie Yu, 'China Orders Banks to Stop Financing Cryptocurrencies as Noose Tightens Around Disrupter' *South China Morning Post* (19 January 2018), <http://www.scmp.com/business/banking-finance/article/2129645/pboc-orders-banks-halt-banking-services-cryptocurrency> (accessed 27 January 2020).

⁶⁴ Ibid.

⁶⁵ Nicole Jao, 'China's Digital Fiat Currency is "Nearly Ready" For Launch: PBOC Official', *Technode* (12 August 2019), <https://technode.com/2019/08/12/chinas-digital-fiat-currency-is-nearly-ready-for-launch-pboc-official/> (accessed 27 January 2020).

⁶⁶ Tim Morrison, 'The Greenback Needs a Digital Makeover', *Foreign Policy* (24 January 2020), <https://foreignpolicy.com/2020/01/24/dollar-reserve-currency-united-states-china-crypto-digital-currency/> (accessed 25 February 2020).

⁶⁷ Andrew P Rowan, 'A Brief History of Bitcoin in Vietnam', *Medium* (22 July 2017), <https://medium.com/@MrRowan/a-brief-history-of-bitcoin-in-vietnam-a41a7b26cb83> (accessed 13 October 2019).

currencies have become popular. While there are no official statistics, it is estimated that the total daily bitcoin trading value is USD 100 million.⁶⁸

In June 2014, the first bitcoin exchange was launched and local businesses started to accept bitcoin in exchange for day to day expenses.⁶⁹ However, most Vietnamese see bitcoin as an investment instrument for speculation purposes, rather than currency for the purchase of services and goods.

Several cases of cryptocurrency scams have accelerated the urgency for the government to develop a legal framework. Ho Chi Minh City-based Sky Mining, the self-proclaimed largest cryptocurrency mining firm in Vietnam, was alleged to have defrauded investors after the director absconded to the United States.⁷⁰ Investors in Sky Mining had been asked to pay between USD 100 and 5,000 for the 7,000 mining rigs that Sky Mining had acquired by computer systems that perform necessary computations for cryptocurrency mining. The investors were promised that they would earn back all their initial investment and make profits of up to 300 per cent.⁷¹ In November 2017 the Public Security Department of the northern province of Bac Giang asserted that three members of a criminal gang had defrauded residents from this province and other nearby localities of billions of Vietnamese Dong (VND).⁷² Most recently there are reports of an alleged USD 660 million scam involving initial coin offerings and affecting 32,000 investors who were swindled out of VND 15 trillion (about AUD 981.4 million) through sales of two ECR-20-standard tokens, Ifan and Pincoin.⁷³

Similar to other countries, cryptocurrency remained unregulated in Vietnam for a period of time after its introduction. In October 2017, the Central Bank of Vietnam addressed the issue by ruling that cryptocurrencies were a prohibited method of payment, with effect from 1 January 2018.⁷⁴ In support of this approach, the Central Bank relied on Decree 101/2012/ND-CP⁷⁵ on non-cash payments, as amended by Decree 80/2016/ND-CP.⁷⁶ This Decree states that the State Bank of Vietnam only recognises ‘checks, payment orders, collection orders, bank cards, and some other SBV-prescribed payment

⁶⁸ Vietnam Law and Legal Forum, above n 18; Georgi Georgiev, ‘Vietnam Calls for Tougher Cryptocurrency Measure Amid Investigation into Possible \$658m Scam’, *Bitcoinist* (13 April 2018), <http://bitcoinist.com/suspected-660-million-ico-scam-calls-for-tough-measures-on-cryptocurrency-in-vietnam/> (accessed 13 October 2019).

⁶⁹ FPT University had announced it would accept payment of tuition fees by Bitcoin. See Huong Hoang, ‘Using Bitcoin to Pay Student’s Tuition Fee in FPT University’ (27 October 2017), <http://international.fpt.edu.vn/fpt-university-accepts-bitcoin-payment/> (accessed 13 October 2019).

⁷⁰ Dy Tung, ‘Thousands Duped by Cryptocurrency Scams in Vietnam in 2018’, *VNExpress* (26 December 2018), <https://e.vnexpress.net/news/business/companies/thousands-duped-by-cryptocurrency-scams-in-vietnam-in-2018-3859459.html> (accessed 13 October 2019).

⁷¹ *Ibid.*

⁷² Straits Times, ‘Vietnam Vows Cryptocurrency Crackdown after \$864m Fraud’, *Straits Times* (12 April 2018), <https://www.straitstimes.com/asia/se-asia/vietnam-vows-cryptocurrency-crackdown-after-864m-fraud> (accessed 27 January 2020); Vietnam Law and Legal Forum, above n 18.

⁷³ Tung, above n 70.

⁷⁴ Osborne, above n 17.

⁷⁵ Government of Vietnam, ‘Decree No. 101/2012/ND-CP of November 22, 2012: On Non Cash Payment’, <http://vietnamlawmagazine.vn/decreed-no-101-2012-nd-cp-of-november-22-2012-on-non-cash-payment-4750.html> (accessed 13 October 2019).

⁷⁶ Government of Vietnam, ‘Decree No. 80/2016/ND-CP of 1 July 2016 on Amendments to Government’s Decree of No. 101/2012/ND-CP dated Nov 22 2012 on Non-Cash Payment’, <https://vanbanphapluat.co/decreed-no-80-2016-nd-cp-amend-governments-decreed-101-2012-nd-cp-on-non-cash-payments> (accessed 13 October 2019).

instruments as lawful means of payment. All other non-cash payment methods are considered illegal'.⁷⁷ Relying on Article 27 of Decree 96/2014/ND-CP⁷⁸, it provides that those who issue, supply or use such forms of payment instruments not stipulated by the State Bank, implicitly bitcoin and other digital currencies, will face a fine of between VND 150 million and 200 million.⁷⁹ As of 1 January 2018, criminal prosecution can also follow a breach.⁸⁰

Despite this, 'the central bank only bans the use of Bitcoin as a means of payment, which means investors in the currency are still able to store and exchange the cryptocurrency as an asset, not a currency unit, without violating the law'.⁸¹ In response the leading virtual currency exchange, Vietnam Bitcoin Company Limited, made a public statement on its website reaffirming that its trading activities do not involve a payment for services (in breach of the law), but rather involves the trading of intangible goods.⁸² Potentially, recognising cryptocurrencies as a commodity, rather than currency that conforms to the criteria of money according to Mishkin,⁸³ could nevertheless allow for bartering transactions, without breaching the law.⁸⁴

In a further recent development, it was reported in March 2019 that Vietnam's Linh Thanh Group has signed a memorandum of understanding (MOU) with Swiss blockchain company KRONN Ventures AG to establish a cryptocurrency exchange, which would facilitate the production of cryptocurrency.⁸⁵ While some speculated whether the companies had received an appropriate licence, a deputy head of the Payment Department under the State Bank of Vietnam (SBV) stated on 1 April 2019 that the State Bank of Vietnam has not granted permission to any virtual and cryptocurrency trading platforms in Vietnam.⁸⁶

Recently, the Prime Minister called for new rules to 'strengthen the management of activities related to cryptocurrencies', including a review of the provisions of the profit tax, income tax and corporation tax considered relevant to cryptocurrencies.⁸⁷ This statement indicates that bitcoin and other cryptocurrencies will be taxed in Vietnam – the only question is how?

⁷⁷ Vietnam Law and Legal Forum, above n 18; Georgiev, above n 68.

⁷⁸ Government of Vietnam, 'Decree on Penalties for Administrative Violations Against Currency Banking' doc no. 96/2014/ND-CP (17 October 2014), <https://thuvienphapluat.vn/van-ban/Tien-te-Ngan-hang/Decree-96-2014-ND-CP-penalties-for-administrative-violations-against-currency-banking-265135.aspx> (accessed 13 October 2019).

⁷⁹ Vietnam Law and Legal Forum, above n 18; Georgiev, above n 68.

⁸⁰ Vietnam Law and Legal Forum, above n 18.

⁸¹ Tuoi Tre News, above n 16.

⁸² Ibid.

⁸³ Mishkin, above n 39, 50-52.

⁸⁴ See the discussion with lawyer Le Cao in Tuoi Tre News, above n 16.

⁸⁵ Alphan Maina, 'First Ever Cryptocurrencies Exchange in Vietnam', *Coinrevolution* (28 March 2019), <https://coinrevolution.com/first-ever-cryptocurrency-exchange-in-vietnam/> (accessed 13 October 2019).

⁸⁶ Vietnam Investment Review, 'Central Bank Gives No Permission to Cryptocurrencies Platforms', *Vietnam Investment Review* (2 April 2019), <https://www.vir.com.vn/central-bank-gives-no-permission-to-cryptocurrency-platforms-66826.html> (accessed 13 October 2019).

⁸⁷ *Cộng Hòa Xã Hội Chủ Nghĩa Việt Nam, Phê Duyệt Đề Án Hoàn Thiện Khung Pháp Lý Để Quản Lý, Xử Lý Đối Với Các Loại Tài Sản Áo, Tiền Điện Tử, Tiền Áo* [The Socialist Republic of Vietnam, Approving the Project to Design a Legal Framework to Regulate Cryptocurrencies and Other Form of Digital Assets, Document No. 1255/QĐ-TTg, 21 September 2017, <https://vanbanphapluat.co/quyet-dinh-1255-qd-ttg-2017-hoan-thien-khung-phap-ly-de-quan-ly-xu-ly-doi-voi-tai-san-ao-tien-ao> (accessed 13 October 2019).

As noted above, the legal treatment of cryptocurrencies will have great implications as to their regulation from a taxation perspective. To this end, Vietnamese lawmakers are still in the process of deciding whether to treat bitcoin as currency or as an asset. So far, there is little detail on the taxation treatment of cryptocurrencies in Vietnam, except that the government is determined to prevent tax evasion from those engaging in cryptocurrency transactions. From the declaration that cryptocurrencies are not a lawful means of payment referred to above, it would seem logical that for taxation purposes Vietnamese lawmakers are likely to continue not to recognise cryptocurrency as money. As discussed below, this however, needs to be supported by legislation expressly confirming such. Equally, the allowance of trading in cryptocurrencies indicates the government will treat it as a commodity.

Any profits could be taxed as corporate business income (tax rate 20 per cent) and for non-corporate taxpayers, taxed as 'non-employment' income which includes business income (tax rate of between 0.5 and 5 per cent), gains from the sale of securities (tax rate 1 per cent of sale proceeds), or capital gains (tax rate 20 per cent of the net gain or 0.1 per cent of sale proceeds).⁸⁸ However, again this needs to be supported by legislation. Equally the 10 per cent VAT could apply to the sale of such commodities. However, financial products and foreign currency trading are excluded from VAT.⁸⁹ Thus once again the very nature of the cryptocurrency as determined by the government will determine the applicability of the VAT.

The need to address the taxation of cryptocurrencies through legislation was highlighted by a recent decision where a local government failed in its attempt to tax the taxpayer of his capital gain made of the sale of bitcoin. A local government had sought to require a bitcoin investor to pay personal and property taxes to the amount of VND 2.6 trillion from gains made from his investment.⁹⁰ In a major victory for the bitcoin investor, the Court held that in absence of any legal provision recognising bitcoin as an asset, the government could not collect taxes from the bitcoin investor.⁹¹ Until the status of cryptocurrencies is confirmed by legislative measures, the taxation of gains and losses will remain uncertain.

In conclusion, the announcement from the Central Bank and statements from the Prime Minister have indicated that, whilst denying cryptocurrency as an instrument of payment, thereby indicating that they are not money as defined by Mishkin,⁹² the government is determined to recognise cryptocurrencies as an intangible asset in a step to tax gains made from cryptocurrency trades. However, until the status of cryptocurrencies is confirmed by legislative measures, the taxation of gains and losses will remain uncertain.

⁸⁸ KPMG, 'Vietnam – Income Tax' (13 March 2018), <https://home.kpmg.com/xx/en/home/insights/2011/12/vietnam-income-tax.html> (accessed 13 October 2019).

⁸⁹ Ibid; PricewaterhouseCoopers, *Vietnam Pocket Tax Book 2016* (1 March 2016), <https://www.pwc.com/asia-practice/assets/vietnam-pocket-tax-book-2016.pdf> (accessed 13 October 2019).

⁹⁰ M Thành, 'Bitcoin Investment: Tax Office Wants to Tax 2.6 trillion, Court Declare No Dollar is Subject to Tax', *Tuoi Tre News* (15 November 2017), <https://tuoitre.vn/kinh-doanh-bitcoin-thue-muon-thu-2-6-ti-toa-tuyen-0-dong-20171115160517126.htm> (accessed 27 January 2020).

⁹¹ Ibid.

⁹² Mishkin, above n 39, at 50-52.

6. JAPAN

Japan is one of the eight largest cryptocurrency markets and has the highest cryptocurrency ownership in the world.⁹³ It is reported that approximately 40 per cent of overall trading in bitcoin is Japanese yen. Significant to these figures is the fact that, since 2018, a large number of cryptocurrency investors have moved away from China after it banned bitcoin transactions.⁹⁴

Japan has positioned itself as a pioneer in regards to cryptocurrency regulation.⁹⁵ Regulations for cryptocurrencies were developed after the collapse of one of the largest bitcoin exchanges, Mt Gox, in 2014.⁹⁶ Two major working group reports were submitted by the Financial Services Agency (FSA) and these submissions resulted in 2017 tax reforms and a revision of the *Payment Services Act*.⁹⁷ The revised *Payment Services Act* was effective from 1 April 2017.⁹⁸ The aims of the revision of the *Payment Services Act* were threefold:⁹⁹

- protect cryptocurrency users;
- induce a registration system for dealers; and
- allow the wider use of cryptocurrencies for payments and remittances.¹⁰⁰

The *Payment Services Act* refers to cryptocurrency as a ‘virtual currency’.¹⁰¹ It is defined as:

- (i) Property value which can be used in relation to unspecified persons for the purpose of paying consideration for the purchase or leasing of goods or the receipt of provision of services and can also be purchased from and sold to unspecified persons acting as counterparties, and which can be transferred by means of an electronic data processing system; and
- (ii) Property value which can be mutually exchanged with what is set forth in the preceding item with unspecified persons acting as counterparties, and which can be transferred by means of an electronic data processing system.

⁹³ Rytis Jakubauskas, ‘How Many People Actually Own Cryptocurrency?’, *Dalia* (11 May 2018), <https://daliaresearch.com/blog-cryptocurrency-ownership/+&cd=1&hl=en&ct=clnk&gl=au> (accessed 27 January 2020).

⁹⁴ Y L Zhou, ‘On Crypto Currencies’ (2018) 4 *Financial Market Research* 74, 78-79.

⁹⁵ Kai Sedgwick, ‘Japan Teaches Western Governments a Lesson in Cryptocurrency Regulation’, *Bitcoin.com* (13 November 2017), <https://news.bitcoin.com/japan-teaches-western-governments-lesson-cryptocurrency-regulation/> (accessed 27 January 2020).

⁹⁶ Sayuri Umeda, ‘Japan’, in Law Library of Congress, *Regulation of Cryptocurrency in Selected Jurisdictions* (The Law Library of Congress, Global Legal Research Center, 2018) 53, <https://www.loc.gov/law/help/cryptocurrency/regulation-of-cryptocurrency.pdf>.

⁹⁷ *Ibid.*

⁹⁸ Keirns, above n 4.

⁹⁹ Ji Ji, ‘Japan’s Financial Services Agency Set to Update Cryptocurrency Regulations in Speculation Countermeasure’, *Japan Times* (2018), <https://www.japantimes.co.jp/news/2018/08/08/business/japans-financial-services-agency-set-update-cryptocurrency-regulations-speculation-countermeasure/#.XSICULsUmCc>. (accessed on 29 August 2019).

¹⁰⁰ *Ibid.*

¹⁰¹ *Payment Services Act 2009*, art 2, para 5.

Subsection (i) of Paragraph 5 of Article 2 of the *Payment Services Act* also states that cryptocurrency is limited to property value which is recorded on an electronic device or any other object by electronic means, and excluding the Japanese currency, foreign currencies, and Currency-Denominated Assets.¹⁰²

The *Payment Services Act* focuses on identifying cryptocurrencies as a payment method. As discussed above in section 3, the concept of a payment method stops short of the medium of exchange criteria of money, stipulated by Mishkin.¹⁰³ In terms of economic substance, as one of the jurisdictions most friendly towards cryptocurrencies, Japan is yet to recognise cryptocurrencies as money, nor has it statutorily afforded legal tender status to cryptocurrencies.

The effect of the revised *Payment Services Act* in force from 1 April 2017,¹⁰⁴ is that bitcoin and other cryptocurrencies are allowed to be used as legal methods of payment, but are not a legally-recognised currency.¹⁰⁵ Only businesses registered with the official Local Finance Bureau are allowed to operate a virtual currency exchange service.¹⁰⁶ Japan's National Tax Agency has decided to treat any income and/or gains from the sale of cryptocurrencies as 'miscellaneous income'.¹⁰⁷ The applicable tax rate ranges from 5 per cent to 45 per cent (explained further below), of which the maximum marginal tax rate applies to taxpayers who have an annual income of JPY 40 million.¹⁰⁸ Note the tax treatment of cryptocurrencies is different to the capital gains tax¹⁰⁹ on disposal of securities and foreign currencies which is imposed at the rate of 20 per cent.¹¹⁰

The tax threshold of 'miscellaneous income' is JPY 200,000. There are seven bands of taxpayers' thresholds. Taxpayers who earn JPY 1.95 million or less will be subject to tax at 5 per cent. The highest national income tax rate is 45 per cent for taxpayers earning more than JPY 40 million. It is noted that there is an additional 10 per cent housing tax

¹⁰² The *Payment Services Act 2009*, art 2, para 6, states that the term 'Currency-Denominated Assets' means assets which are denominated in the Japanese currency or a foreign currency, or for which performance of obligations, refund, or anything equivalent thereto (hereinafter referred to as 'performance of obligations, etc.' in this paragraph) is supposed to be made in the Japanese currency or a foreign currency. In this case, assets for which performance of obligations, etc. is supposed to be made by means of Currency-Denominated Assets are deemed to be Currency-Denominated Assets.

¹⁰³ Mishkin, above n 39, 50-52.

¹⁰⁴ Keirns, above n 4.

¹⁰⁵ Yuzo Kano, 'The Virtual Currency Act Explained', *bitFlyer* (2019), <https://bitflyer.com/en-jp/virtual-currency-act> (accessed 27 January 2020).

¹⁰⁶ *Payment Services Act 2009*, arts 63-2 and 63-3. See also Financial Services Agency, Japan, 'Details of Screening for New Registration Application as Virtual Currency Exchange Service Provider' (2017) Appendix 2, <http://www.fsa.go.jp/en/news/2017/20170930-1/02.pdf> (accessed 27 January 2020).

¹⁰⁷ *Income Tax Act* (Act No. 33 of 1965), art 35, amended by Act No. 74 of 2017.

¹⁰⁸ Yuko Takeo and Maiko Takahashi, 'Crypto Investors Face Tax of Up to 55% in Japan', *Bloomberg [online]* (9 February 2018), <https://www.bloomberg.com/news/articles/2018-02-08/crypto-investors-in-japan-face-tax-of-up-to-55-on-their-takings> (accessed 27 January 2020).

¹⁰⁹ *Income Tax Act* (Act No. 35 of 1965), art 33, amended by Act No. 74 of 2017.

¹¹⁰ At the individual level, capital gains on the disposal of securities will be included as general income for income tax purposes. Capital losses in the current period must be deducted from capital gains: L X Wu, 'Securities Tax System in Japan' (1997) 9 *Foreign Economies and Management* 24; S L Rui, *Research on Capital Gains Tax Policy of International Comparison in Securities Market and the Enlightenment* (MSC Dissertation, Shanghai Customs College, 2015).

and therefore cryptocurrency investors potentially can pay at the highest tax rate of 55 per cent.¹¹¹

Table 1: National Income Tax Rate, Japan¹¹²

Taxable Income (JPY)	Tax Rate (%)	Deduction (JPY)
below 1,950,000	5	0
above 1,950,000 and less than 3,300,000	10	97,500
above 3,300,000 and less than 6,950,000	20	427,500
above 6,950,000 and less than 9,000,000	23	636,000
above 9,000,000 and less than 18,000,000	33	1,536,000
above 18,000,000 and less than 40,000,000	40	2,796,000
Above 40,000,000 yen	45	4,796,000

According to current tax agency rules, taxpayers who hold a bitcoin for future gains do not need to pay tax until the gain is realised. Under this regime there are three ways a capital gain/loss can be made on trading involving cryptocurrencies. First, and obviously, a taxpayer may sell a cryptocurrency for profit. Second, the taxpayer may use the cryptocurrency to pay for goods or services. In this case, the taxpayer will be liable for tax when payment is made with the virtual currency. The capital gain is in turn calculated by subtracting the acquisition cost price of the bitcoin from the price of the

¹¹¹ Kazuaki Nagata, 'Cryptoprofits are Taxable — Have You Filed?', *Japan Times* (18 February 2018), <https://www.japantimes.co.jp/news/2018/02/18/business/financial-markets/cryptoprofits-taxable-filed/#.Wupx5qSFND8> (accessed 27 January 2020).

¹¹² *Income Tax Act* (Act No. 33 of 1965), art 89, amended by Act No. 74 of 2017; Tyton Capital Advisors, 'Japan and Tax on Cryptocurrency – Part 1' (2018), <https://www.tytoncapital.com/investment-advice-japan/japan-and-tax-on-cryptocurrency-bitcoin/> (accessed 27 January 2020).

purchased goods and services. For example, if the acquisition cost of the bitcoin is JPY 200,000 and the price of goods purchased is JPY 1 million, the taxable capital gain is JPY 800,000 (ie, JPY 1 million minus 200,000). Third, any gain from the exchange of a virtual currency to another type of virtual currency will be taxable and the way to compute the capital gain is similar to the way in calculating the capital gain on the exchange of goods as mentioned earlier. In general, a capital loss on disposal of cryptocurrency is not allowed. Only capital losses from the disposal of real estate, business, assets transfers and forestry income can be deducted from income.

A penalty of 20 per cent plus delay fines will apply for those who refuse to pay tax on their cryptocurrency gain. Japan's tax authorities are able to trace and identify account holders from reports prepared by currency exchanges. Therefore, taxpayers who have made capital gains from trading cryptocurrencies are not able to avoid tax.¹¹³ The 2017 tax reforms also exempted virtual currency trading from consumption tax, effective 1 July 2017.¹¹⁴

On 31 May 2019, the Japanese House of Representatives amended the *Payment Services Act* and the *Financial Instruments and Exchange Act*.¹¹⁵ In particular, the term 'virtual currency' is replaced by a new term 'crypto asset', which is used by the G20 and better describes cryptocurrencies.¹¹⁶ Also it has been suggested that certain types of cryptocurrencies such as tokens could be recognised as 'securities' for purposes of Japanese securities regulations.¹¹⁷ This will become effective from April 2020.

In conclusion, under the *Payment Services Act*, bitcoin and other cryptocurrencies are allowed to be used as legal methods of payment, but are not a legally recognised currency.¹¹⁸ Only businesses registered with the official Local Finance Bureau are allowed to operate a virtual currency exchange service.¹¹⁹ Virtual currency trading is exempt from consumption tax.¹²⁰

7. SOUTH KOREA

After the United States and Japan, South Korea is believed to be the largest market for cryptocurrency trading in the world.¹²¹ In January 2018 trade in Bitcoin in Korean won

¹¹³ Nagata, above n 111.

¹¹⁴ *Cabinet Order for Partial Revision of the Order for Enforcement of the Consumption Tax Act*, Official Gazette (Extra Edition No. 7), 31 March 2017, 250.

¹¹⁵ Act No. 25 of 1948, as amended.

¹¹⁶ An FSA report states that 'the term "crypto-asset" has recently been used in international discussions. Moreover... to prevent misunderstanding that virtual currency is equivalent to fiat currency': Financial Services Agency, Japan, *Report from Study Group on Virtual Currency Exchange Services* (21 December 2018) 30 (references omitted), <https://www.fsa.go.jp/en/refer/councils/virtual-currency/20181228.html> (accessed 27 January 2020).

¹¹⁷ Katsuhiko Fujihira and Seth A Graham, 'FSA Proposes Bill to Amend Japanese Laws Regulating Cryptocurrency-Related Businesses', Morrison Foerster Client Alert (9 April 2019), <https://www.mofo.com/resources/publications/190409-japanese-cryptocurrency.html> (accessed 27 January 2020).

¹¹⁸ Kano, above n 105.

¹¹⁹ Financial Services Agency, Japan, above n 106.

¹²⁰ *Cabinet Order*, above n 114.

¹²¹ Chrisjan Pauw, 'South Korea and Crypto Regulations, Explained', *Cointelegraph* (6 February 2018), <https://cointelegraph.com/explained/south-korea-and-crypto-regulations-explained> (accessed 27 January 2020).

(KRW) stood at approximately 4 per cent of all trades.¹²² While this compares to more than 40 per cent of total bitcoin trade in Japanese yen and roughly 30 per cent transacted in US dollar terms,¹²³ South Korean trade still plays a significant part in the overall market. Moreover, consequent to such rising demand in South Korea, cryptocurrencies have at times traded at prices 30 per cent higher than prices in other countries.¹²⁴

Initially it appeared South Korea would follow the approach taken in Japan and allow for cryptocurrencies at both levels: ICOs and trading. However, after China banned the currency, South Korea decided on a major turnaround.¹²⁵ It followed suit and announced on 28 September 2017 a ban on all kinds of ICOs. Specifically, South Korea's Financial Services Commission prohibited domestic companies and start-ups from issuing ICOs.¹²⁶ Those involved in breaches of this prohibition would face 'stern penalties'.¹²⁷ Currently the legislature is considering lifting the ban, allowing for the issuing of domestic ICOs.¹²⁸ However, this would only be allowed after exchanges met stringent conditions and in the framework of regulator supervision.¹²⁹

There were rumours that the government would follow China's approach and also ban domestic trading of cryptocurrencies.¹³⁰ In response, the government instead announced a crackdown on anonymous trading.¹³¹ On 23 January 2018 South Korea's Financial Services Commission issued a press release asserting that from 30 January 2018 it will only allow trade in cryptocurrencies from real-name bank accounts.¹³² It also announced that it will introduce a guideline to prevent cryptocurrency-related money laundering ('Cryptocurrency-related AML Guideline').¹³³ The measures outlined were intended to 'reduce room for cryptocurrency transactions to be exploited for illegal activities, such as crimes, money laundering and tax evasion'.¹³⁴ Thus the focus of the measures is to combat the otherwise prevalent anonymity underpinning cryptocurrencies and the illegal use of cryptocurrencies facilitated by this anonymity.

Information on the consequent tax treatment of trading in cryptocurrencies in South Korea is lacking. Corporate income (CIT) is taxed under Article 19 of the Income Tax Act at marginal rates, the top rate recently being increased to 25 per cent for income

¹²² Cheang Ming, 'New Cryptocurrency Rules Just Came Into Effect in South Korea', *CNBC* (30 January 2018), <https://www.cnn.com/2018/01/29/south-korea-cryptocurrency-regulations-come-into-effect.html> (accessed 27 January 2020); Nagata, above n 111.

¹²³ Ming, above n 122.

¹²⁴ Pauw, above n 121.

¹²⁵ Cynthia Kim, 'South Korea Bans Raising Money Through Initial Coin Offerings', *Reuters* (29 September 2017), <https://www.reuters.com/article/us-southkorea-bitcoin/south-korea-bans-raising-money-through-initial-coin-offerings-idUSKCN1C408N> (accessed 27 January 2020).

¹²⁶ *Ibid.*

¹²⁷ Gertrude Chavez-Dreyfuss and Angela Moon, 'Factbox: National Regulators Views on Initial Coin Offerings', *Reuters* (28 November 2017), <https://de.reuters.com/article/us-blockchain-regulation-tokens-factbox/factbox-national-regulators-views-on-initial-coin-offerings-idUKKBN1DS0FW> (accessed 27 January 2020); Kim, above n 125.

¹²⁸ Kim, above n 125.

¹²⁹ *Ibid.*

¹³⁰ Pauw, above n 121.

¹³¹ Financial Services Commission, Republic of Korea, 'Financial Measures to Curb Speculation', above n 20.

¹³² *Ibid.*

¹³³ *Ibid.*

¹³⁴ *Ibid.*

over KRW 300 million.¹³⁵ Table 2 summarises the CIT rates applicable for the fiscal year starting on or after 1 January 2018.

Table 2: Corporate Income Tax Rate, Korea, 2018¹³⁶

Tax base (KRW million)		Tax rate	
Over (column 1)	Less than	Tax on column 1 (KRW)	Marginal tax rate (%)
0	200	0	10
200	20,000	20	20
20,000	300,000	3,980	22
300,000		65,580	25

For individuals, business income is included in their taxable income and taxed at progressive rates up to 46.2 per cent. In addition to the personal income tax (PIT) rates detailed below, there is also a local income tax that is assessed at a rate of 10 per cent of the PIT rates. Table 3 summarises the PIT rates applicable for the income received from 1 January 2018.

¹³⁵ Deloitte, 'Korea: 2018 Tax Amendments in Effect' (10 January 2018), <https://www.taxathand.com/article/9020/Korea/2018/2018-tax-amendments-in-effect> (accessed 27 January 2020).

¹³⁶ Ibid.

Table 3: Personal Income Tax Rates, Korea, 2018¹³⁷

Annual taxable income (KRW thousands)		Tax rate	
Over (column 1)	Less than	Tax on column 1 (KRW)	Marginal tax rate (%)
0	12,000	0	6
12,000	46,000	720	15
46,000	88,000	5,820	24
88,000	150,000	15,900	35
150,000	300,000	37,600	38
300,000	500,000	94,600	40
500,000		174,600	42

More importantly to our discussion, for corporations capital gains are included in their ordinary income and taxed at the above rates.¹³⁸ Unlike corporations, for individuals capital gains are taxed separately either at a flat rate or progressive rates depending on the nature of the property.¹³⁹

From 1 January 2016, capital gains tax applies to income arising from derivative transactions such as futures.¹⁴⁰ The basic tax rate is 22 per cent (including local income tax), but the government is authorised to apply a flexible tax rate of 11 per cent for stocks transferred on and after 1 April 2018.¹⁴¹ Sales of listed shares are exempt from capital gains tax. However, where the taxpayer (and associates) are a ‘major shareholder’ (holding 1 per cent or more of the shares in the listed entity or total value exceeds KRW 1.5 billion) the capital gains are taxed at the rate between 22 and 27.5 per cent (33 per cent if held for less than one year), including the local income tax.¹⁴² If the shares are in a small and medium-sized company, the capital gains are taxed at 11

¹³⁷ PricewaterhouseCoopers, ‘Republic of Korea: Individual – Taxes on Personal Income’, <http://taxsummaries.pwc.com/ID/Korea-Individual-Taxes-on-personal-income> (accessed 29 August 2019).

¹³⁸ EY, ‘Korea (South): 2018 Worldwide Corporate Tax Guide’, <https://www.ey.com/gl/en/services/tax/worldwide-corporate-tax-guide---xmlqs?preview&XmlUrl=/ec1images/taxguides/WCTG-2018/WCTG-KR.xml> (accessed 29 August 2019); Deloitte, *International Tax Korea Highlights 2018*, <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-koreahighlights-2018.pdf> (accessed 29 August 2019).

¹³⁹ Deloitte, *International Tax Korea Highlights 2018*, above n 138.

¹⁴⁰ PricewaterhouseCoopers, ‘Republic of Korea: Individual – Income Determination’, <http://taxsummaries.pwc.com/ID/Korea-Individual-Income-determination> (accessed 29 August 2019).

¹⁴¹ Ibid.

¹⁴² Ibid.

per cent (including the local income tax).¹⁴³ There is a separate securities transaction tax (STT) on the sale of shares, taxed at a rate of 0.3 per cent on the sale of listed shares and the rate is increased to 0.5 per cent if the shares are unlisted.¹⁴⁴ The default capital gains tax rate is 20 per cent. Thus, depending on whether cryptocurrencies are treated as a financial product (derivative or security) or 'other' commodity, they could be taxed accordingly.

As with the other jurisdictions considered in this article, South Korea applies a VAT. The standard rate is 10 per cent. As with many other jurisdictions, foreign currency (Article 24) and financial supplies (Article 26) are zero-rated under the Value Added Tax Act.¹⁴⁵

While the taxation of business income is clear cut and the inclusionary nature of all capital gains in the taxable income of corporations is less complicated than the varying rates that apply to individuals, the characterisation of the commodity will affect the taxation of capital gains derived by both groups. Equally, the applicability of the VAT will come down to the crucial questions: is cryptocurrency a commodity? Is it a financial product? Is it currency? Only the South Korean government can determine this crucial matter.

8. CONCLUDING THOUGHTS

The above discussion highlights the very different stances that governments may take towards cryptocurrencies. At one end of the spectrum, China has rejected cryptocurrencies as a legal form of payment and effectively banned trading in cryptocurrencies, particularly bitcoin. Concerns as to the use of cryptocurrencies in money laundering and illegal activities clearly underpins this approach in China, Vietnam and South Korea. In the case of Vietnam, the stance taken by the government is also probably a protectionist measure to protect the Vietnamese currency. Japan, by contrast, has taken the polaristic view that cryptocurrencies are legal forms of payment and sought to support and foster trading in them. Clearly this is spurred by that country's embrace of e-commerce and the benefits that flow from same. As to which way a government might turn is anyone's guess: A toss of a (bit)coin!

This in turn raises many difficult tax issues. Characterising the cryptocurrency is going to be the key to the assessability of any gains made through trades. If they are treated as a commodity, then existing business income, personal income and capital gains tax provisions can apply and provide for assessment of these gains, subject to any applicable exceptions. To this end, capital gains will be chargeable when the cryptocurrencies are sold, traded or exchanged (as the case may be),¹⁴⁶ rather than on an accruals basis.

However, even if a tax system grapples with these issues and seeks to apply its income tax or capital gains tax to such trades, a further issue relates to the valuation of the sales and cost base from the exchange of cryptocurrency. As the price of cryptocurrency is

¹⁴³ Ibid.

¹⁴⁴ Hak Rae Cho and Jin Woo Lee, 'Tax on Corporate Transactions in South Korea: Overview', *Practical Law* (1 September 2018).

¹⁴⁵ See further EY, *Worldwide VAT, GST and Sales Tax Guide 2018* (April 2018), https://www.ey.com/Publication/vwLUAssets/EY_Worldwide_VAT,_GST_and_Sales_Tax_Guide_2018/%24File/Worldwide%20VAT,%20GST%20and%20Sales%20Tax%20Guide%202018.pdf.

¹⁴⁶ Tyton Capital Advisors, 'Japan and Tax on Cryptocurrency – Part 2' (2018), <https://www.tytoncapital.com/investment-advice-japan/japan-and-tax-on-cryptocurrency-part-2/>.

fluctuating, there is a lack of an objective valuation method and trading platforms to determine the value of the cryptocurrency. This is especially the case given that, as established above, the economic substance of cryptocurrencies is not that of money, so that the foreign currency valuation models could not be applied to value cryptocurrencies. Further, some cryptocurrencies, such as Bitcoin Cash and Bitcoin Gold, allow coin-splits into different parts or provide free native tokens to current cryptocurrency investors. Quantifying these coin-splits and subsequent gains could be a challenge. The current tax treatment in Japan is that the split-coins and free native tokens obtained through mining are considered to have a zero face value at acquisition.¹⁴⁷

Furthermore, a related issue is to decide the types of expenditure eligible for tax deduction. For example, should the electricity expense related to the mining of the cryptocurrency be deductible? Also, many taxpayers are holding their cryptocurrency in 'paper wallets' or other physical devices. Should the cost/loss be tax deductible when a taxpayer loses access to their crypto wallets or when their cryptocurrency is embezzled by hackers such as Coinbase?¹⁴⁸

Whether cryptocurrency is considered a financial product akin to a share also entails further tax and non-tax issues. Financial products are regulated under securities legislation, normally administered by a state authority. If cryptocurrencies are not considered financial products, the danger is that they will be unregulated without further government regulatory intervention. From a tax perspective, if they are considered financial products, trading in cryptocurrencies will again be subject to existing business income, personal income and in some cases, capital gains tax provisions. However, as noted above, financial products are often exempt from capital gains and normally exempt from GST/VAT.

There are further issues in the context of GST/VAT. If a cryptocurrency is deemed to be a commodity, as in Vietnam and South Korea, the trade of a digital currency for consideration would constitute a supply for VAT purposes. By contrast if it is treated as currency, as in Australia and the European Union, the exchange of cryptocurrency is zero-rated.¹⁴⁹

This article has focused on key domestic tax issues in this regard. However, there are further international tax issues. Due to the rapid growth of the digital economy, the taxation of cryptocurrencies presents a great challenge to the existing tax system. In particular, the nature of cryptocurrencies often poses problems in determining the source of tax and tax collection.¹⁵⁰

Both domestic tax laws and double tax agreements are based on the core notions of 'source' and 'residence', and at times 'domicile'. For example, in Japan, permanent tax residents who have a domicile in Japan are subject to tax on their worldwide income.

¹⁴⁷ Ibid

¹⁴⁸ Tyton Capital Advisors, 'Japan and Tax on Cryptocurrency – Part 3' (2018), <https://www.tytoncapital.com/investment-advice-japan/japan-and-tax-on-cryptocurrency-part-3/>.

¹⁴⁹ See the discussion of the European Court of Justice (ECJ) decision in *Case (C-264/14) Skatteverket v David Hedqvist* in Rose Boevé, 'Bitcoin and Other Cryptocurrencies in Tax' (2018) 29(2) *International Tax Review* 51. In regard to the Australian position, see further Cassidy and Cheng, above n 5.

¹⁵⁰ Yang Xiao Qian, *The Impact and Countermeasures of Enterprise Income Tax in the Era of Digital Economy -- Based on the International Comparison Perspective* (MSc Dissertation, Guizhou University of Finance and Economics, 2017) 19-27.

Non-permanent domicile residents are taxed on all income except foreign source income that is not paid in or remitted to Japan. In China, domicile and non-domicile individual taxpayers who are long-term residents pay tax on their worldwide income, and therefore such individuals pay tax on certain investment income (including capital gains) regardless of where it is sourced or received. On the other hand, non-domicile individual taxpayers who reside in China for less than six years pay tax on China-sourced investment income only. As discussed in this article, digital technology allows the trading of cryptocurrencies from a remote platform. One challenge to the application of an income tax system to trades in cryptocurrencies is the difficulty in determining the source of the income. In turn, should the tax be imposed by the source country of the enterprise/exchange or to the tax resident trader? In the digital economy era, electronic transactions are often characterised by a lack of physical nature. In particular, it is difficult to apply the traditional concept of tax residency in the context of cryptocurrency trading. This impacts not only on issues of source and residence, but also complicates the tax collection process. These are all issues with which nations across the globe will have to grapple.