

# THE COMMISSIONER'S POSITION ON BITCOIN: A SEARCH FOR A LEGAL OR ECONOMIC RATIONALE

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## ABSTRACT

Occasionally a novel financial instrument is created that does not fit standard categories, consequently its economic and legal treatment may become inconsistent depending upon the circumstances under which it is used. Inevitably the relevant authorities for each circumstance will attempt to deal with a new instrument according to existing settled criteria or rules which may create a distortion whereby the legal treatment does not reflect the economic substance of the arrangement. At the very least some uncertainty may be created which, in relation to taxation, may breach the canon of certainty and create economic distortions in free market decisions.

It could be anticipated that a rigid formulaic or legal approach to any analysis of Bitcoin is more likely to create distortions. A broad-principles approach generally has more scope to adapt to new instruments, however uncertainty may exist in the short term until the matter becomes settled either through litigation or legislation. The Commissioner of Taxation has released rulings and public documents stating his position in relation to Bitcoin as opposed to the wider range of cryptocurrencies in general. The scope limitation to Bitcoin is perhaps prudent because it generally has a narrow range of uses, primarily intended for peer-to-peer payments.

The purpose of this paper is to review some economic and legal principles behind various positions adopted by The Commissioner of Taxation in relation to alternative forms of money or currency, specifically those relating to Bitcoin.

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## I: INTRODUCTION TO THE BITCOIN PROTOCOL

“Math started as a means to record wealth and divide land. Most ancient math records ... are lists of transactions.”<sup>1</sup>

The term *mathematics* is a derivation of the Greek word for “knowledge” and computing was initially studied as a discipline of mathematics. Another significant branch of mathematics is ‘number theory’ from which the study of relations within data structures enables the design of efficient databases. Number theory is also a fundamental tool for cryptography which enables data protection and secure exchange of information over insecure channels<sup>2</sup>.

The Bitcoin open source protocol<sup>3</sup> uses cryptographic tools to provide information security in a publicly maintained distributed ledger system. The cryptographic tools provide:

- Data integrity: the blockchain is a tamper-evident append-only transaction list or ledger. Cryptographic techniques are used to detect data manipulation such as insertion, deletion or substitution. Any invalid version of the database is simply discarded by the network.
- Authentication: transactions broadcast on the network are verified as to the originator using digital signatures and message data integrity is protected using cryptographic hash functions. Unauthorised transactions will not be processed (appended to the ledger).
- Non-repudiation: an entity is prevented from denying any previous commitments by the blockchain database recording the original transaction credentials with signature check. This prevents a ‘double spend’ by a user, despite that person having authority.

Bitcoin is a ledger-based protocol whereby authorised (cryptographically signed) transactions are verified and appended to the transaction register. The main difference between the Bitcoin protocol and conventional payment systems is lack of a web of contractual arrangements between participants. No credit is extended between users of the system and there is no collective membership obligated to accept bitcoin as a payment. The Bitcoin system is a voluntary open source scheme and the unit of account is not pegged to any currency, its value relies on community consensus.

Key monetary features are:

- There is no centralised manager of the ledger:
  - Bookkeeping and transaction verification are collectively performed by miners and nodes who maintain their own local version of the network database and achieve synchronisation by consensus.
  - Transaction fees and new bitcoin accrue to the successful miner of the latest block as an incentive to provide database services.

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<sup>1</sup> Tom Jackson (ed), *Mathematics: An Illustrated History of Numbers*, (Shelter Harbor Press, New York, 2017) 6.

<sup>2</sup> Alfred J Menez et al, *Handbook of Applied Cryptography*, (CRC Press 1997).

<sup>3</sup> Capitalised Bitcoin notation refers to the protocol, while lower case refers to the denomination.

- There is no central custodian, issuer or transaction processing agent:
  - Initial issue was by a pre-mined quantity of bitcoin for the early adopter community, acting as a bootstrap to promote growth and network effects
  - Every ten minutes, a quantity of new bitcoin is issued as a reward to the successful miner of a transaction block. The reward rate decreases over time as a deflationary measure. As the network effect increases, the quantity of transactions increase and fees replace the decreasing block mining reward to maintain miner incentives.
  - No bitcoin is redeemed by an issuer. A holder may exit their position either by exchange for fiat currency or for goods and services with a third party who will accept bitcoin as a payment.
  - Bitcoin is not pegged to any fiat value, issue is automatic according to an algorithm used by participating nodes and miners. There are no redemption rights under any scheme that may provide an underlying value.
- Effectively a negotiable medium of exchange:
  - Bitcoin is pseudonymous, and a standard payment transaction is irreversible.
  - Transactions occur across international boundaries and payment is accepted by participants without consideration of any equitable claims on the virtual currency transferred.

## II: CHALLENGES IN CHARACTERISING BITCOIN

*"... there is the obvious objection that shoe-horning a modern payment technology like virtual currencies into concepts defined by Victorian legislation (i.e. Bills of Exchange Act 1882) would seem to be retrogressive and, without amendment, precluded by the legislation itself."*<sup>4</sup>

The legal aspect of virtual currency is important in identifying legal risks to a payment system and may assist in designing relevant regulation. For example, if title to virtual currency passes to a good faith recipient based solely upon possession then the *nemo dat* rule will not apply, thereby facilitating a real-time settlement. From an economic and taxation viewpoint, the fiscal neutrality between payment systems should be a high priority in order to promote financial innovation and global competitiveness. Risk control while promoting efficiency and competition in the market for payment services are objectives of the Payments System Board as administered by the Reserve Bank of Australia<sup>5</sup>. The *Model Law on Electronic Commerce*<sup>6</sup> has a broad aim of treating functionally equivalent paper-based and electronic commerce as being equal at law. This is intended to reduce legal obstacles, uncertainty and risk.<sup>7</sup>

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<sup>4</sup> Financial Markets Law Committee, *Issues of Legal Uncertainty Arising in the Context of Virtual Currencies*, July 2016.

<sup>5</sup> *Reserve Bank Act 1959*.

<sup>6</sup> 55 UNTS 162.

<sup>7</sup> Mark Sneddon, 'Expert group recommends e-commerce legal framework', (Communications Update 63, Communications Law Centre, 1998) 13.

### ***EU VAT classification of Bitcoin – early guidance***

The European Union VAT exemption for Bitcoin is an example of an early attempt to categorise a new financial asset according to existing legal definitions and provides a useful background. In 2014 the first working paper<sup>8</sup> issued by the Value Added Tax Committee of the European Commission recognised that the innovative nature of Bitcoin prevented it from fitting comfortably within an existing category, namely:

- i. Electronic money
- ii. Currency
- iii. A negotiable instrument
- iv. A security
- v. A voucher
- vi. A digital product

If Bitcoin was found to be a currency, negotiable instrument or security then the Committee Services would turn its attention to whether the exemption provision for supplies relating to money and finance located within Article 135(1) of the VAT Directive may apply.

#### Electronic money

The Commission Services expressed an opinion that Bitcoin is not electronic money because it does not have a claim on the issuer<sup>9</sup>, fails to maintain any link with a traditional currency and only a limited number of issuers are recognised in the Directive<sup>10</sup>. This position is consistent regarding conventional electronic money systems where the customer purchases a floating claim on an issuer, such as a bank or ADI, using conventional money and the customer then exchanges these claims with merchants for goods and services<sup>11</sup>. The stored funds are expressed in the same unit of account as per the purchase agreement. Transmission form may be by:

- i. Stored value card, which may be incorporated into a smart card; and
- ii. Electronic tokens, otherwise known as 'digital cash' or 'network money'

The Bitcoin payment system has no centralised authority or issuer and the token does not represent a claim on any issuer. The nearest equivalence to a currency issue is that the protocol rewards miners for successfully processing a transaction block, the reward is newly created bitcoins. This is in addition to any fees earned from parties to the

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<sup>8</sup> Working paper No 811.

<sup>9</sup> Article 2 of Directive 2009/110/EC.

<sup>10</sup> Article 1(1) of Directive 2009/110/EC.

<sup>11</sup> Mahbubur Rahman Syed et al, *Electronic Commerce: Opportunity and Challenges*, (Idea Group Publishing, 2000) 236.

transactions that were processed in the block just mined<sup>12</sup>. The miner then sells bitcoin on the secondary markets such as by using an exchange where persons may acquire new bitcoin in exchange for their traditional fiat currency. Alternatively, merchants can accept bitcoin in consideration for a supply of goods or services to the miner.

The key issue observed by the ECJ was that the bitcoin amount controlled by the consumer or merchant retains no traditional currency link and does not represent a claim on any issuer<sup>13</sup>. The term 'virtual currency' is generally used for such assets.

### Currency

The VAT Committee briefly summarised the basic economic functions of a traditional currency as being a medium of exchange, unit of account and store of value before stating that the volatility of Bitcoin indicates that it is unlikely to be a currency. Additionally, considering no member state had declared bitcoin as legal tender<sup>14</sup>, the Committee concluded that the VAT exemption for transactions and payments concerning currency used as legal tender may not apply<sup>15</sup>.

In a subsequent 2015 decision, the CJEU in *Hedqvist* held that a cryptocurrency exchange business was providing an exempt intangible service where bitcoin was exchanged for a state issued currency<sup>16</sup>. The court was careful not to equate Bitcoin with a currency, however it had strong regard to Bitcoin primarily being used as a medium of exchange in financial transactions and consequently any VAT imposition would inconsistent with the Directive<sup>17</sup>. The spread between bid and ask prices in foreign currency exchange transactions has previously been held by the ECJ as the remuneration for the service of exchanging the currency, while the currency exchange itself was disregarded<sup>18</sup>. To some commentators the application to *Hedqvist* by the ECJ was considered a pragmatic and broad interpretation of the VAT exemption<sup>19</sup>.

The Commission Services subsequently acknowledged the *Hedqvist* decision was limited to transactions concerning exchange of bitcoins for traditional currencies, however it took note of the court statement that "...Bitcoin acts as a means of payment and no VAT should be levied on the value of the bitcoins themselves nor

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<sup>12</sup> A. Antonopoulos, *Mastering Bitcoin: Programming The Open Blockchain*, 2<sup>nd</sup> ed, O'Reilly Media Inc.

<sup>13</sup> Article 2 of the EU Electronic Money Directive (2009); Aleksandra Bal, 'Stateless Virtual Money in the Tax System', (2013) 53(7) *European Taxation* 351; Rhys Bollen, 'The Legal Status of Online Currencies – Are Bitcoins the Future?' (2016) Melbourne Business School, Financial Institutions, Regulation & Corporate Governance (FIRCG) Conference. Available at SSRN: <https://ssrn.com/abstract=2736021> or <http://dx.doi.org/10.2139/ssrn.2736021>

<sup>14</sup> Above n 9, 6

<sup>15</sup> Article 135(1)(e) of Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax.

<sup>16</sup> C-264/14: *Skatterverket v David Hedqvist*

<sup>17</sup> *Ibid* 52

<sup>18</sup> *Commissioners of Customs and Excise v First National Bank of Chicago*, [1998] EUECJ C-172/96

<sup>19</sup> Asres Gikay, 'Regulating Decentralized Cryptocurrencies Under Payment Services Law: Lessons from European Union Law', (2018) 9 *Journal of Law, Technology & the Internet*

associated services.”<sup>20</sup>. The Commission Services concluded that exemptions could extend to wallet services and mining fees for processing transactions, an equivalence to GST input taxed financial supplies.

### Negotiable instrument

The original VAT Committee position was that Bitcoin might be deemed to be a negotiable instrument<sup>21</sup>. Their reasoning followed the CJEU decision in *Granton Advertising* concerning the interpretation in of ‘other negotiable instruments’ for the purpose of the VAT exempting provision in Article 135(1)(d)<sup>22</sup>. The Committee service also referred to the principle purpose of exempting all operations concerning money transfers and instruments that facilitate transactions and transfers of money<sup>23</sup>. However, in a subsequent decision, the CJEU in *Hedqvist* merely looked at the legal substance of the arrangement as a direct means of payment between operators and any electronic document inferred does not derive its value from another currency, consequently it does not satisfy the legal definition of a negotiable instrument<sup>24</sup>.

The Commissioner of Taxation considers that Bitcoin is not an ‘instrument’ because this requires a ‘formal legal document’<sup>25</sup>. The blockchain is an append-only record of all valid transactions ever processed, the database is a virtual document which includes the sender’s digital signature as proof of ownership and the encumbrance to a payee who knows the private key to a specified Bitcoin address<sup>26</sup>. The payment system is peer-to-peer, not involving adjustment of claims against intermediaries because the protocol is not an issuer of any security and there are no claims upon it. It is not a contract in the normal sense as the movement of funds may not be related to providing consideration for anything<sup>27</sup> and no rights or obligations exist between participants in the protocol.

### Security, voucher or digital product

In the *Hedqvist* case, the CJEU held that Bitcoin is not a security conferring a property right or representing a debt, and is not a security of a comparative nature within the exempting provisions<sup>28</sup>.

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<sup>20</sup> Working paper No. 892, [5.3]

<sup>21</sup> Above n 9, 7.

<sup>22</sup> CJEU, Advocate General Kokott opinion, C-461/12, point 40.

<sup>23</sup> Ben Kjus and Julie Terra, *Commentary – A Guide to the Sixth VAT Directive (Historical Archive)*, ), IBFD Tax Research Platform 2014), Ch 10.

<sup>24</sup> *Skatterverket v David Hedqvist*, C-264/14 [42].

<sup>25</sup> GSTR 2014/3, [78].

<sup>26</sup> Above n 12, 119.

<sup>27</sup> Farisa Tasneem, *Enforceability of Electronic Contracts in Australia*, (PhD thesis, RMIT, 2015).

<sup>28</sup> Article 135(1)(f) of the VAT Directive.

The Commission Services expressed an opinion that bitcoin is not a voucher because the intended use is as a medium of exchange to obtain any goods and services from any supplier that will accept it<sup>29</sup>.

The Commission Services adopted the position that bitcoin is not a digital product due to the ECJ statement in the *Hedqvist* that bitcoin has no other purpose than being a means of payment. A digitally delivered product is a service which is as an aim in itself<sup>30</sup>.

### ***2014 ATO rulings and determinations***

HM Revenue and Customs issued a vague brief on Bitcoin and other cryptocurrencies in March 2014 which remains today<sup>31</sup>. The VAT Commission issued their first working paper in October 2014 in response to a UK delegation seeking clarification as to how VAT would apply to Bitcoin. The ATO issued several rulings and determinations regarding Bitcoin in December 2014.

#### TD 2014/26

The position that Bitcoin is a CGT asset is generally non-contentious. Unlike Bitcoin, Australian currency is generally not subject to CGT by being the universal unit of account to determine tax liability to the government, who is the issuer of that currency. The Commissioner acknowledges the use of Bitcoin as a medium of exchange by imputing the personal use exemption to amounts of bitcoin acquired solely in order to exchange for a personal use asset<sup>32</sup>.

#### TD 2014/25

The Commissioner holds that bitcoin is not a foreign currency based upon Australian precedence for the institutional view of money<sup>33</sup> and reliance on the Currency Act requiring contracts to be payable in either Australian currency or the currency of another country<sup>34</sup>. HMRC on the other hand expressed a preliminary opinion that Bitcoin should be treated as a foreign currency for the purposes of company tax<sup>35</sup>.

Central bank economists may deny that bitcoin is a currency by using the functional definition and highlighting the volatile nature as a store of value<sup>36</sup>. While it is acknowledged that volatility is a risk to wider acceptance, merchants take practical

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<sup>29</sup> Above n 9, [3.1.5].

<sup>30</sup> Above n 22, [5.2.1].

<sup>31</sup> Revenue and Customs Brief 9 (2014): *Bitcoin and other cryptocurrencies*.

<sup>32</sup> ATO Taxation Determination TD 2014/26, [18].

<sup>33</sup> *Leask v Commonwealth* [1996] HCA 29; (1996) 187 CLR 579.

<sup>34</sup> Sections 9 and 11 of the Currency Act 1965.

<sup>35</sup> Above n 31.

<sup>36</sup> Stefan Ingves, *Going Cashless: Money, Transformed: The future of currency in a digital world*, (Finance and Development, IMF, June 2018), 12.

steps to minimise their exposure to 'exchange rate risk' of accepting bitcoin payments using the following strategies<sup>37</sup>:

- Posting website prices in local fiat currency and only providing an alternative bitcoin price at check-out
- Quoted bitcoin price or exchange rate is valid only for a short time
- Goods returns are only offset by in-store credit
- Remittances are usually promptly transferred to an online exchange for conversion to fiat

Similarly, the Federal Commissioner of Taxation does not consider Bitcoin to be money in the broader sense based on the functional definition because it is not sufficiently widely accepted<sup>38</sup> which is again a question of fact and degree. By August 2015 it was estimated that over one hundred thousand merchants accepted Bitcoin worldwide<sup>39</sup>.

For the narrower concept of a currency, the Commissioner acknowledges that 'currency' is not defined for income tax legislation. 'Foreign currency' is defined as 'a currency other than Australian currency'<sup>40</sup>, it does not read as 'a currency of a country other than Australia'. However, the Commissioner argues that the definition of foreign currency must be read together with the Currency Act which mandates that contracts be specified in either Australian currency or otherwise a currency of another country<sup>41</sup>.

The practical implications of not being a foreign currency is that bitcoin transactions are treated as barter for the purpose of income tax<sup>42</sup>. By way of contrast, a comprehensive income tax code for foreign currency transactions is capable of capturing unrealised economic gains and losses<sup>43</sup>. The legislation recognises that contemporary payment systems and investments do not require physical holding or delivery unlike concepts in common law<sup>44</sup>. The code applies to both revenue and capital transactions and provides record keeping concessions such as functional currency elections as well as exemptions for private and domestic transactions potentially greater than the CGT personal use exemption. Barter, on the other hand, relies upon ordinary principles and basic statutory extensions to assess non-cash consideration, much originally being developed to deal with countertrade<sup>45</sup>.

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<sup>37</sup> Lo, S. and Wang, J., *Bitcoin as Money: current Policy Perspectives*, (Federal Reserve Bank of Boston, No 14-4, September 2014), 4.

<sup>38</sup> ATO Taxation Determination TD 2014/25, [23].

<sup>39</sup> Bitpay Inc., <https://blog.bitpay.com/bitcoin-a-new-global-economy/> (accessed December 2018)

<sup>40</sup> Section 995-1 of the Income Tax Assessment Act 1997.

<sup>41</sup> Above n 38, [31].

<sup>42</sup> Above n 38, [34].

<sup>43</sup> Division 775 of the Income Tax Assessment Act 1997 combined with translation rules in Subdivisions 960-C and 960-D.

<sup>44</sup> For example see *FCT v Energy Resources of Australia Limited*, (1996) ATC 4536, 4350.

<sup>45</sup> ATO Taxation Ruling IT 2668.



### TD 2014/28

The Commissioner considers that employee remuneration using Bitcoin is a property fringe benefit. Consequently, Australian resident employers and foreign resident employers with a significant Australian presence are liable for FBT on such remuneration for worldwide services of resident employees and Australian source services of foreign resident employees<sup>46</sup>. For example, IT companies with remote workforces including employees working from their homes and providing intellectual services through a virtual office may prefer Bitcoin as the remuneration method. This not only solves logistical issues and costs of foreign exchange transactions, it also appeals to early adopter IT employees. However, the FBT rate and compliance burden for employers is an obstacle to employing Australian residents, attracting overseas talent or establishing a significant presence in Australia. Some IT companies accept sales consideration in Bitcoin, however in-house property exemptions or concessions for using virtual currency proceeds as employee remuneration is not available because Bitcoin is intangible property<sup>47</sup>.

HMRC guidance suggests that employee remuneration by Bitcoin is assessable income to the employee as a readily convertible asset and consequently subject to PAYE<sup>48</sup>. 'Salary or wages' for the purposes of the Fringe Benefits Tax Assessment Act 1986 is defined by reference to PAYG withholding tax obligations<sup>49</sup>. Considering the adverse FBT outcome of the Commissioner's opinion, it is possible to define a particular benefit in respect of employment as not being a fringe benefit and have it fall within the PAYG withholding system. An example is a car expense reimbursement using the cents per kilometre basis<sup>50</sup>. There is little inconvenience in withholding from non-cash payments of Bitcoin due to its fungible nature and convenient access to exchanges, a similar process to ordinary electronic banking.

### GSTR 2014/3

The Commissioner adopted the position that a supply of Bitcoin is not a supply of money. The GST Act defines money inclusively, extending to payment by crediting or debiting an account and by use of certain financial instruments such as promissory notes, bills of exchange and other negotiable instruments intended for circulation<sup>51</sup>. This includes the broad functional approach to money used by economists and adopted in *Moss v. Hancock*<sup>52</sup>. The GST definition is derived from the EU VAT provisions and perhaps it is not surprising that the 2014 HMRC brief and 2015 CJEU decision in *Hedqvist* focused on use of Bitcoin as a medium of exchange. The court had regard to the purpose of Article 2(2) of the VAT Directive that money in general is not for consumption. However, the Federal Commissioner

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<sup>46</sup> ATO Taxation Determination TD 2011/1.

<sup>47</sup> Section 136(1) Fringe Benefits Tax Assessment Act 1986 (FBTAA); TD 2014/26 [12]

<sup>48</sup> HMRC Guidance, "Paying employees in shares, commodities or other non-cash pay", 2014 (updated 2018)

<sup>49</sup> Section 136(1) FBTAA.

<sup>50</sup> Section 22 FBTAA.

<sup>51</sup> Section 195-1 A New Tax System (Goods and Services Tax) Act 1999.

<sup>52</sup> [1899] 2 QB 111.

of Taxation eliminated the listed alternatives in the GST definition of money by legal analysis, being accounts used for payments and negotiable instruments, and examined the remaining category consisting of 'currency'. The Commissioner then adopted the institutional view of money by having significant regard to the decision in *Leask v Commonwealth* and provisions of the Currency Act which uses the terms 'currency of Australia' and 'money of Australia' interchangeably<sup>53</sup>. The position adopted was that due to Bitcoin not being issued by a sovereign government then it is not a currency within the legal meaning, despite the GST definition being inclusive. The Commissioner considered that it is not necessary to consider the functional test in *Moss* and stated:

"Custom alone, whether it be local or international, cannot make something 'money' in the absence of an exercise of monetary sovereignty by the State concerned."<sup>54</sup>

In a submission to the Senate Inquiry, the Tax Institute highlighted the anomalous characterisation of Bitcoin for tax law as depending upon foreign sovereign treatment.<sup>55</sup>

Coinjar Pty Ltd, a successful start-up cryptocurrency exchange business, relocated its headquarters from Melbourne to London and incorporated as a UK entity in December 2014. The decision was partly in order to save its Australian customers from GST on its services after the issue of the ATO draft ruling, citing the favourable HMRC position<sup>56</sup>.

In 2015, the Australian Senate Economics References Committee recommended that the definition of 'money' be amended<sup>57</sup>. However, in 2017 the definition of a 'supply' was amended to exclude a supply of 'digital currency' and the definition of a financial supply was amended to include digital currency<sup>58</sup>. A digital currency is defined as a widely available fungible digital unit of consideration whose value is not based on the value of any other thing or associated entitlements<sup>59</sup>. By not including a digital currency as money then this avoids potential fettering of courts interpretive powers relating to the ordinary meaning currency. For example, the ECJ decision in *Hedqvist* was careful not to equate Bitcoin as a currency while adopting a purposive interpretation of the VAT legislation.

### III: EXAMPLE: TAXATION OF PRIVATE MONEY – COAL SCRIP

Community money does not have to be legal tender, however it would need to be accepted as a 'common tender'<sup>60</sup>.

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<sup>53</sup> Sections 9 and 11 of the Currency Act 1965.

<sup>54</sup> GSTR 2014/3, [108].

<sup>55</sup> Tax Institute, Submission No 16 to Commonwealth Senate Economics Reference Committee, Inquiry into Digital Currency, 1 December 2014.

<sup>56</sup> <https://support.coinjar.com/hc/en-us/articles/202504025-UK-Relocation>.

<sup>57</sup> The Senate Economics Reference Committee, *Digital currency—game changer or bit player*, August 2015.

<sup>58</sup> Treasury Laws Amendment (2017 Measures No. 6) Act 2017 No. 118, 2017; Subsection 9-10(4) GSTA

<sup>59</sup> Section 195-1 GSTA.

<sup>60</sup> Richard H Timberlake, 'Production of Scrip-Money in the Isolated Community', *Journal of Money, Credit and Banking*, (1997) 19(4), 437-447.

It is difficult to find an example of contemporary private money that bears a close analogy to Bitcoin as a trustless system without a central issuer and denominated other than in a sovereign currency. Contemporary community money schemes are ledger scrip that is often denominated in their proprietary 'trade dollars'. These schemes are based upon mutual obligations and trust or alternatively based upon multilateral contracts in the case of commercial barter exchanges. Effectively the members are extending trade credit on a multilateral basis whereas Bitcoin is a trustless system without any claims on an issuer.

Private banks have issued their own notes for circulation such as during the United States free banking period and is current practice for certain Scottish banks<sup>61</sup>. The legal nature of private bank notes, as tangible documented obligations denominated in a sovereign currency, would be promissory notes or other negotiable instruments intended for circulation as money. Consequently, they would be money for GST purposes and regarded as a payment of wages such that FBT would not apply. Interestingly, Scottish notes are not legal tender in any country of the UK, including Scotland which does not include such tender statutes. By way of contrast, Bitcoin is an intangible asset, does not represent a claim on an issuer and is not denominated in a sovereign currency such that it is not a negotiable instrument from a legal definition<sup>62</sup>.

Vendors or sales platform providers may issue vouchers redeemable only for their products or services. For a short period, Facebook issued its own virtual currency denominated in their proprietary "Facebook credits" which were redeemable against goods and services of approved suppliers<sup>63</sup>. These credits were not designed for circulation outside of the sales platform and were pegged at a fixed fraction of a USD. The company soon reverted to maintaining customer accounts denominated in the user's local currency.

Mid-nineteenth century coal scrip provides an example of circulating community money through practical negotiation of tokens that would provide a useful comparison if they had substituted digital tokens instead. For a period of approximately fifty years, private mining companies issued scrip as a local medium of exchange in remote US communities where currency was difficult to source. A company had to attract employees by providing facilities such as housing, schools and company stores in the absence of local private enterprise to satisfy employee needs. The company itself solved the drain on working capital and problems of sourcing scarce currency by acting as a 'payday lender' through issue of store credit against an employee's accrued wages at the employee's request. The initial form was ledger-scrip but later moved to coupons as a cheaper method than maintaining a manual ledger, and then finally migrated to reusable metal scrip<sup>64</sup>.

In the absence of currency in the community, anonymous coupon or token scrip was commonly accepted by third parties and households in lieu of legal tender resulting in

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<sup>61</sup> Bank of Scotland, Clydesdale Bank and Royal Bank of Scotland.

<sup>62</sup> Above n 24.

<sup>63</sup> Joshua Gans and Hanna Halaburda, *Some Economics of Private Digital Currency*, Bank of Canada working paper 2013-38.

<sup>64</sup> Stuart E Brown, *Scrip: trade tokens issued by the United States coal mining companies and company stores*, (Berryville: Virginia Book Company, 1978).

circulation like money<sup>65</sup>. Practical negotiation was localised due to the remote nature of the community, consequently such scrip was not held to be in breach federal laws relating to coining of money<sup>66</sup>. The value of the scrip was effectively pegged by the company through store goods pricing to maintain a par with outside communities, otherwise employees would resign and pursue employment with another company. Even if scrip was denominated in amounts other than State currency, this is merely an issue of translation. For example, in commercial barter schemes that peg their proprietary 'trade dollars' to Australian currency then the Commissioner will accept the recorded ledger amounts as being fair market value where exchange transactions generally occur at the same value as in normal markets<sup>67</sup>.

The economic function as a monetary store of value is less important for coal scrip because, for employees as holders, the relevant time horizon is the next payday. The essential monetary functions under these circumstances are the unit of account and medium of exchange. Coal scrip bears a resemblance to pre-funded store vouchers where the accrued wages represent the funding. It would be interesting to speculate as to how an equivalent private money would have been taxed in Australia and compare with an alternative contemporary virtual currency issue.

The fact that coal scrip is only issued by the employer upon an individual employee request, and only to the extent of wages accrued to that day of the current pay cycle, suggests this should be treated as constructive receipt of wages and not a fringe benefit<sup>68</sup>. Upon redemption by an employee or their associate then an in-house property fringe benefit may arise<sup>69</sup>, however redemption of a face value voucher will not give rise to any fringe benefits tax liability in relation to goods priced similarly to comparable markets.

Issue of scrip is not a financial supply, for example it is neither a linked payment system nor a prepayment linked to an ADI<sup>70</sup>. It is not a creation of a debt at law because settlement is to be by provision of goods instead of money. The GST definition of 'money' includes currency and negotiable instruments used, circulated or intended for use or circulation as currency<sup>71</sup>. The Commissioner has expressed an opinion that 'currency' is limited to a State issued sovereign currency<sup>72</sup>, while negotiable instruments are limited to instruments in writing<sup>73</sup> and coal scrip is not for use or circulation as a sovereign currency of any country.

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<sup>65</sup> Elaine Tan, 'Scrip as private money, monetary monopoly, and the rent-seeking state in Britain', *The Economic History Review*, 64(1) 2011, 237-255.

<sup>66</sup> Lewis D. Solomon, 'Local Currency: A Legal and Policy Analysis', *Kansas Journal of Law and Public Policy* (1995) 5, 59-92.

<sup>67</sup> ATO taxation ruling IT 2668 [15], as amended by IT 2668A.

<sup>68</sup> Subsection 6-5(4) of the Income Tax Assessment Act 1997 (Cth); ATO Tax Ruling 2001/10, Income tax: fringe benefits tax and superannuation guarantee: salary sacrifice arrangements, [28].

<sup>69</sup> ATO ID 2014/17.

<sup>70</sup> Reg 40.5.12 GSTR.

<sup>71</sup> Section 195-1 GSTA.

<sup>72</sup> ATO Tax Determination TD 2014/25 [26].

<sup>73</sup> *Re Otto Azevedo v Secretary to the Department of Primary Industries and Energy* [1992] FCA 84.

The coal company, as issuer, is obliged to supply unspecified goods to a stated value and the scrip will be treated as a voucher for GST purposes<sup>74</sup>. Coal scrip was issued to employees at face value for redemption at advertised prices in the company store. Consequently, no GST liability would arise upon issue and the company would be liable upon redemption based on the face value as consideration for a taxable supply of goods<sup>75</sup>. A third-party merchant who accepts scrip from a coal company employee as consideration will be liable for GST upon supply of goods or services to the employee, but the merchant does not make a supply when they subsequently redeem the face value voucher at the coal company store<sup>76</sup>. Vouchers were protected from double incidence of GST for the issuer under the original legislation relating to consideration, however the taxing point was initially at the time of voucher purchase<sup>77</sup>. Deferral of GST until redemption was introduced in consequence of the tax status being unknown at the time the voucher was purchased<sup>78</sup>.

It is possible for a voucher to be issued and redeemed electronically<sup>79</sup>, for example as a transferrable and redeemable community cryptographic token in order to serve the same purpose as coal community money. There is an anti-overlap provision preventing a virtual currency from being regarded as 'digital currency' where there are substantial restrictions on redemption terms such as being limited to a specific retailer's products<sup>80</sup>. Digital coal scrip would not be a digital currency because it provides benefits of goods on redemption separate from any ability to use as consideration as a community medium of exchange<sup>81</sup>. If the community existed in the European jurisdiction then it is unlikely that the ECJ would declare the transaction as an exempt transaction because the scrip is not 'solely for use as a medium of exchange' despite the court's wide interpretation of the VAT directive to prevent double incidence of tax on a medium of exchange<sup>82</sup>.

Had the coal company used Bitcoin instead then it is not a voucher because it is widely accepted as consideration<sup>83</sup>. Under the 2017 GST amendments<sup>84</sup>, Bitcoin is a 'digital currency' and remuneration of employees or contractors would be an input taxed financial supply. A third-party bearer of Bitcoin as payment for goods at the company store would not be making a supply, resulting in the same effect as presenting physical currency, a face value voucher or alternatively a negotiable instrument circulated as money such as a coal company cheque endorsed by the employee to the bearer<sup>85</sup>.

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<sup>74</sup> Subsection 100-25(1) GSTA.

<sup>75</sup> Subsection 100-10(3) GSTA.

<sup>76</sup> Subsection 100-10(1) GSTA.

<sup>77</sup> Former Subsection 9-15(3)(a) GSTA.

<sup>78</sup> Supplementary Explanatory Memorandum to A New Tax System (Indirect Tax and Consequential Amendments) Bill (No. 2) 1999.

<sup>79</sup> GSTR 2003/5 [25].

<sup>80</sup> Explanatory Memorandum to the Treasury Laws Amendment (2017 Measures No. 6) Bill 2017 [1.27]

<sup>81</sup> *Ibid* [1.34].

<sup>82</sup> Above n 24.

<sup>83</sup> Above n 9, [3.1.5]

<sup>84</sup> Treasury Laws Amendment (2017 Measures No. 6) Act 2017 No. 118, 2017.

<sup>85</sup> ATO Tax Determination TD 2014/25 [26]; GSTR 2014/3 [73].

So far, we have only considered coal scrip as constructive receipt of accrued salary and wages. Salary sacrificed Bitcoin would be subject to FBT in a similar manner to a salary sacrificed face value voucher as intangible property despite the Bitcoin being practically negotiable and may pass into world-wide circulation. Employee remuneration in Bitcoin would be a type 2 fringe benefit because the employer would not have been entitled to an input tax credit on acquisition. Similarly, the employer should not be liable for GST in relation to an employee contribution, for example where an employee is liable to indemnify the employer against adverse exchange movements under an agreement.

Other than the GST concession for a digital currency, Bitcoin is subject to FBT as if it were a barter transaction with an outcome analogous to a voucher issue in a closed system. However, bitcoin lacks an issuer or redemption obligation and will circulate widely due to lack of restrictions on its use. In relation to remunerating contractors with Bitcoin, fair market value would apply for the barter transaction which would then be subject to income tax at the contractor's marginal rate. This provides less tax and compliance costs relating to remunerating of contractors compared with employees. If the employer was dealing in Bitcoin, such as by being a Bitcoin miner instead of a coal miner, then this outcome is in direct contrast to the policy of in-house fringe benefits concessions for tangible property.

#### IV: INFLUENCE OF THE STATE THEORY OF MONEY

Australian courts and the Commissioner refer to *Mann on the Legal Aspect of Money*<sup>86</sup> regarding the argument for the State theory of money. Mann observes that "monetary sovereignty is an attribute of a modern State under international law"<sup>87</sup>. From an economic view, fiat currency is a modern invention of worthless paper whose acceptance depends upon coercive State powers. For example, government payments and transfers are denominated in State currency while taxes are only accepted in that same denomination<sup>88</sup>. Mann suggests that a legal framework should exist which recognises only monetary systems created by States and with mutual recognition under international law.

In *Leask v Commonwealth*, Brennan CJ referred to 'currency' using the state theory of money<sup>89</sup> as described by Mann. The context of the case was in relation to the *Financial Transactions Reports Act 1988* (FTR Act). This legislation has an exhaustive definition of 'currency' as being "coin or paper money of Australia or a foreign country that is designated as legal tender and circulates as, and is customarily used and accepted as, a medium of exchange in the country of issue"<sup>90</sup>. The comments of Brennan CJ should perhaps be read in the context of this statute.

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<sup>86</sup> C. Proctor, *Mann on the Legal Aspect of Money*, (Oxford University Press, 6<sup>th</sup> ed)

<sup>87</sup> *Ibid*, [1.12].

<sup>88</sup> Stephanie Bell, 'The role of the state and the hierarchy of money' (2001) *Cambridge Journal of Economics* 25, 149-163

<sup>89</sup> *Leask v Commonwealth* [1996] 29; (1996) 187 CLR 579.

<sup>90</sup> Subsection 3(1).

Except in respect of cash dealers, the *Anti-Money Laundering and Counter-Terrorism Financing Act 2006* (AML Act) now applies to 'designated transactions' and 'physical currency' takes the FTR Act definition of 'currency'. 'Money' is defined in the AML Act using a similar manner to the economic principles of 'broad money' as including physical currency and money held in an account, or on deposit, denominated in Australian currency or any other currency<sup>91</sup>. While the 'money' definition includes non-Australian currency denomination, there is no requirement that this be a currency issued by the government of another country nor required to be legal tender. To avoid doubt, designated transactions specifically include transactions involving 'digital currency'<sup>92</sup>. The digital currency definition uses a combination of both functional and State theory approach by defining as a medium of exchange acting as a store of economic value or unit of account and is not issued by authority of a government body<sup>93</sup>. This is much broader than the GST definition to reflect the protective aims of the legislation.

Adoption of the narrow state theory of money in common law appears to be compelling Australian regulators to create a separate statutory category for digital currencies to reflect economic and social use as money. In contrast, regulatory bodies of other jurisdictions have taken a broad interpretation of existing legislation in order to bring digital currencies within scope for purposes such as consumer protection. For example, the U.S. Commodity Futures Trading Commission (CFTC) has had its opinion that Bitcoin is a 'commodity' upheld by a federal judge in relation to prosecuting a fraudulent sale of virtual currencies<sup>94</sup>. The definition of a 'commodity product' lists specific traditional tangible items traded as commodities and then includes foreign currency agreements and transactions<sup>95</sup>. The CFTC has authority over retail commodity transactions other than simple spot trades taking actual delivery within a short period of time. This is an example of a broad purposive court interpretation which enables regulation regarding off-exchange financed transactions marketed to retail customers.

## V: CONCLUSION

The Commissioner has adopted the narrow state theory of money. The position that Bitcoin is barter has caused inconsistency, complexity and uncertainty in application of revenue laws and discriminates against digital currency payment systems that use community consensus value.

Uncertainty in regulation of virtual currencies may discourage adoption of innovative payment systems in Australia. The GST legislation has been amended in a way that has not defined digital currency as money, perhaps in order to avoid tension with the State theory approach. The barter position results in FBT applying to employee remuneration without

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<sup>91</sup> Section 5.

<sup>92</sup> Section 6.

<sup>93</sup> Above n 84.

<sup>94</sup> *CFTC v McDonnell, et al.* 2018 WL 3435047 (2018) United States District Court Eastern District of New York.

<sup>95</sup> Section 2(c)(2)(D) of the Commodity Exchange Act.

ability to access in-house concessions due to the intangible property classification. There is an active and accessible market for Bitcoin such that it would be simple to make payments subject to the withholding regime by treating as salary or wages. For income tax, the Commissioner regards Bitcoin as not being a foreign currency because it is not issued by a foreign government. Consequently, the comprehensive income tax code for foreign currency transactions capable of capturing unrealised economic gains and losses is unavailable for Bitcoin.

It has been postulated that complex regulation of retail payments stored-value facilities in Australia may account for very low market penetration by services such as WeChat Pay and Alipay which, in contrast, are thriving in other countries with lower market penetration by banks<sup>96</sup>. It could be argued that taxation complexity will further hinder adoption in Australia of innovative payment systems whose values are not denominated by a sovereign currency.

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<sup>96</sup> *Review of Retail Payments Regulation: Stored-value Facilities*, Council of Financial Regulators Issues Paper, 2018