# What is the future of Bitcoin as a political and economic project?

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Please note this is my personal opinion and is not a recommendation to buy or sell any assets including Bitcoin or other Crypto currencies. At Mount Martha Accountants we specialise in Tax and Private Wealth Management and can advise on the tax implications of your Cryptocurrency trading.

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# Introduction

Bitcoin is perhaps the most popular and the first of a series of Cryptocurrencies. At one time Cryptocurrencies were a little understood and uncommon investment. Now Cryptocurrencies are so popular that they are in the financial press like the Australian Financial Review, Bloomberg and Financial Times every day. According to the Reserve Bank of Australia Cryptocurrencies: "Cryptocurrencies are digital tokens. They are a type of digital currency that allows people to make payments directly to each other through an online system"<sup>1</sup>. In his original paper Satoshi Nakamoto also defines his invention Bitcoin as: "an electronic payment system"<sup>2</sup>. And while I agree with Nigel Dodd and others that Bitcoin has generated a thriving community around its political ideals, [and] relies on a high degree of social organization in order to be produced <sup>3</sup> this political aspect of Bitcoin is not it's core purpose or impact and we should be looking at Bitcoin from as a possible economic project. In the end I believe that Bitcoin fails to meet Satoshi Nakamoto's goal of making an electronic payment system and will not remain long term as a lasting economic, social or political project.

To understand Bitcoin as a Political or Economic project we need to look at what is Bitcoin and how it could be an economic, social or political project; how does it compare with the traditional banking system that it is theoretically replacing as well as the history of money and how Bitcoin fits within or as some writers hope breaks this system. In his original paper Satoshi Nakamoto describes Bitcoin as "an electronic payment system" and on further discussion he discusses that it will not be regulated by or supervised by government in the same way banks are, instead Bitcoin was designed to rely on the consensus approval framework built into the system to verify transactions and protect against double spending<sup>5</sup>. In reality group decision making by influential miners and the core coding group within the Bitcoin Network have also evolved to design and enforce regulation of the system as a whole.

Bitcoin does have a lot of potential as a way to transfer funds and transact across borders in an a easy and (theoretically) cheap and instantaneous way but there are issues around capacity and the total computer power required to run the system at the moment is prohibitive in terms of power use which then flows on to a heavy environmental cost due to the Carbon Dioxide produced.

More Recently public perception of Bitcoin has focused on it's use as a store of wealth or as appreciating asset supposedly guaranteed to avoid the effects of inflation as the number of Bitcoin that can exist is limited. Bitcoin's underlying code is programmed to ensure that the total number of Bitcoins in existence will never exceed 21 million. How does this compare to traditional currently and the banking system? Bitcoin very volatile and there has been a lot of press about recent falls and this is an issue if you are looking at Bitcoin as a store of wealth, Bitcoin is \$31,048 AUD today this is roughly the same as 18Dec 2020 and well down from it's peak of \$87,843 12 Nov 2021.

<sup>&</sup>lt;sup>1</sup> Digital Currencies, Reserve Bank Of Australia. Downloaded 3<sup>rd</sup> Dec,

https://www.rba.gov.au/education/resources/explainers/cryptocurrencies.html

<sup>&</sup>lt;sup>2</sup> Bitcoin a Peer-to-Peer Electronic Cash System, Nakamoto, Materials [2]

<sup>&</sup>lt;sup>3</sup> Nigel Dodd, "The Social Life of Bitcoin" (2018) 35 Theory, Culture & Society 2018, 35 [1]

<sup>&</sup>lt;sup>4</sup> Bitcoin a Peer-to-Peer Electronic Cash System, Nakamoto, Materials [2]

<sup>&</sup>lt;sup>5</sup> Ibid [2]-[4]

 $<sup>^{\</sup>rm 6}$  Nigel Dodd, "The Social Life of Bitcoin" (2018) 35 Theory, Culture & Society 2018, 37 [3]

# The History of Money

Common narratives around the history of money commonly state that the need for money came out of a natural progression from Barter to money

However there are no clear examples of societies where barter was common and many ancient cultures used some centralised management of resources<sup>7</sup>. Other ancient cultures seem to have accounted for goods and resources produced and/or traded directly for example the Sumerians used Cuneiform imprints on clay tablets to keep track of trade,<sup>8</sup> the Egyptians similarly kept detailed records of goods produced and traded around 3000BC.<sup>9</sup>

By the time we get to the Roman and Achaemenid Empire money in the form of gold coins (in the Roman Empire) and Silver (in the Achaemenid Empire) existed with some goods and some taxes denominated in gold and silver (as a form of Money). While other taxes were levied in their "native" state. For example landholders were often required to pay a proportion of their crop as a form of tax to the emperor state. <sup>10</sup> <sup>11</sup> You could argue that the emergence of money in these empires alongside clear evidence of regular taxation of citizens could mean that the reason or part of the reason money emerged was to enable tax collection. Heading out to farms to collect a portion of a farmers wheat or pork is quite cumbersome compared to collecting gold coins to take back to the Emperor. There are some early writers on Cryptocurrency that had hoped cryptocurrencies would be able to disconnect governments and their tax departments from our money. <sup>12</sup>

According to David Graeber money's core function are reason for being is to quantify and document debt. "The difference between ~ debt and an obligation is that a debt can be precisely quantified. This requires Money"<sup>13</sup> And certainly there are example that support this such as the people of Yap who in the absence of "money" invented their own currency fei which the people of Yap seemed to primarily use to secure debts for past and future obligations. As well as the people of Yap English and European trade developed their method of accounting for debts to enable trade to take place without transacting in physical money or gold.

<sup>&</sup>lt;sup>7</sup> For example the Iroquis discussed in David Graeber, Chapter 2 ("the Myth of Barter"), Debt: The First 5000 Years

<sup>&</sup>lt;sup>8</sup> Guisepi, Robert Anthony; F. Roy Willis (2003). "Ancient Sumeria". International World History Project. Robert A. Guisepi. Archived from the original on 17 December 2017. Downloaded Dec 10th

<sup>&</sup>lt;sup>9</sup> Unknown, Ancient Egyptian sources for the history of accountancy, https://www.ucl.ac.uk/museums-static/digitalegypt/pdf/accountancy.pdf

<sup>&</sup>lt;sup>10</sup> Günther, Sven, 'Taxation in the Greco-Roman World: The Roman Principate', Oxford Handbook Topics in Classical Studies (online edn, Oxford Academic, 1 Apr. 2014),

https://doi.org/10.1093/oxfordhb/9780199935390.013.38, accessed 9 Dec. 2022.

<sup>&</sup>lt;sup>11</sup> Kleber, Kristin, 'Taxation in the Achaemenid Empire', Oxford Handbook Topics in Classical Studies (online edn, Oxford Academic, 1 Apr. 2014), https://doi.org/10.1093/oxfordhb/9780199935390.013.34, accessed 9 Dec. 2022.

<sup>&</sup>lt;sup>12</sup> May, Timothy, The Crypto Anarchist Manifesto, 1988, https://nakamotoinstitute.org/crypto-anarchist-manifesto/ (this paper is listed on "The Nakamoto Institute" as possible background work that Nakamoto built his Bitcoin paper from)

<sup>&</sup>lt;sup>13</sup> David Graeber, Chapter 2 ("the Myth of Barter"), Debt: The First 5000 Years

<sup>&</sup>lt;sup>14</sup> Felix Martin, 'Chapter 1: What is Money?,' in Money: The Unauthorised Biography

Is it possible that "this drive to exchange... creates that division of labor responsible for all human achievement and civilization." <sup>15</sup> and if so then we have always needed some form of "money" whether this took the form of shells, rocks or a debt ledger to allow this exchange of labour. Some researchers believe that because of this tie between money and our intrinsic desire to exchange and trade with one and other that money can never be viewed as a purely financial item. Zelizer, V believes that money is actually a "special category of social relations, much as is kinship or religion." <sup>16</sup>

# Banks and Traditional banking

Fast forward to modern day Australia and we still use money as a medium of exchange between people but money is also quite heavily connected to debts (for example many purchases of goods are made with credit cards, cars and houses often bought using a loan) and the ability to gather data for taxation purposes is an important feature of our banking system.

From a security point of view we have strong supervision of banks in Australia through APRA despite this some do not trust the banks stability and/or government generally. In the past there have been failures in banks in Australia and Overseas but generally banks are robust and in Australian regulation is strong. As an additional measure in the Global Financial Crisis the Australian Government put in place a deposit guarantee of up to \$250,000 per bank<sup>17</sup> (this is in the case a bank goes under or out of business) this guarantee remains in place today.

In Australia as an Individual human (rather than a business or company) transactions within Australia are generally free or very cheap ~\$10/11 per month for a bank account but free bank accounts are also common. With the introduction of the Osko system 18 payments bank-bank can also be made instantly, outside of Osko payments between Australian banks generally take around one clear business day.

As soon as we try moving money to overseas the effectiveness of traditional banks decreases; costs can increase (\$2.40 for an international transfer at my bank) and there is a cost to transfer to many if not all international destinations. Payments to some countries require SWIFT or other transfer protocols which can be quite prohibitive commonly \$20 or more per transaction. Swift is also slow taking 24hrs -5 days.

There are other payment protocols like Visa and Mastercard. With Visa and Mastercard there is generally a cost to having one of these cards to the user per year as well as interest if you are not paying off your credit card debt. Inside Australia beyond these annual and interest charges there is generally no cost to the payer per transaction with the receiver bearing the direct cost of around 1% of the value. Similar to bank accounts once you start transacting with businesses that are overseas these costs often go up. You also need the opposite party to also accept Visa or Mastercard payments as a Merchant so this limits the pool of possible parties you can transact with quite a lot.

(Melville House Publishing, 2011)

<sup>&</sup>lt;sup>15</sup> A reference from within: (reference list not available) David Graeber, Chapter 2 ("the Myth of Barter"), Debt: The First 5000 Years

<sup>&</sup>lt;sup>16</sup> Viviana Zelizer, "The Social Meaning of Money: "Special Monies"" (1989) 95

The American Journal of Sociology 371

<sup>&</sup>lt;sup>17</sup> https://www.apra.gov.au/financial-claims-scheme-0

<sup>&</sup>lt;sup>18</sup> https://osko.com.au/home

In Australia as long as you can provide the required identity documents you can open a bank account and use the banking system with few restrictions. This is not the case in some other countries where the central government restricts access and/or use. For example in Iran the government recently restricted access to it's banking systems to foreign nationals <sup>19</sup> and some countries have other restrictions for example on moving money across national borders, making it hard and expensive to move money to another country or buy goods overseas.<sup>20</sup>

In some countries the population as a whole has low access to banking. This can lead to financial inclusion problems, in some countries women in particular have poor access to banks for example the percentage of women over 15 who hold bank accounts in: Yemen 1.7%, Pakistan 7.0%, Cambodia 21.5%. This compares badly with the average of 63% for the world or top ranking countries for financial inclusion like Denmark, Norway and Sweden who all have 100% of women over 15 holding bank accounts.<sup>21</sup>

### Bitcoin

Presuming you are moving from native currency then you have a cost to convert AUD to Bitcoin then you pay a spread generally around  $1\%^{22}$  so this is inline with the embedded cost of Visa MC but if the receiver also converts this back to native currency, then they will also pay this spread on their conversion so this doubles up to around 2% - there are cheaper exchanges but around 1% is quite common. If you work in Bitcoin and do not convert back to a traditional currency then these costs disappear.

As well as the spread to buy Bitcoin the Bitcoin system pays transaction fees to miners for verifying and processing transactions, this fee varies widely depending on system congestion. On December 10<sup>th</sup> 2022 the average fee was \$0.898 USD, in the last on month the highest fee per transaction was \$2.593.<sup>23</sup> These fees are not too bad when you look at the costs of international transactions in traditional banking systems but they are too high compared when doing domestic transactions.

Bitcoin is fast (instant) and this is an advantage over SWIFT and most payment methods.

You also have the cost or revenue or price falls and gains, if your transaction timeframe is short then this volatility risk is quite low but it increases with the time held.

Talking about dollar costs, environmental impacts cost of carbon are also an issue for Bitcoin. The total carbon produced for one Bitcoin transactions is a staggering 680.89 kg according to the Bitcoin

<sup>&</sup>lt;sup>19</sup> Iran limits foreignes' access to banking services, <a href="https://en.otaghiranonline.ir/news/33851">https://en.otaghiranonline.ir/news/33851</a> published July 3rd, downloaded December 11<sup>th</sup>.

<sup>&</sup>lt;sup>20</sup> For example: Foreign Exchange Controls in China, Trade Commissioner of Canada, <a href="https://www.tradecommissioner.gc.ca/china-chine/control-controle.aspx?lang=eng">https://www.tradecommissioner.gc.ca/china-chine/control-controle.aspx?lang=eng</a> Downloaded December 11th

<sup>&</sup>lt;sup>21</sup> Georgetown Institute for Women, Peace and Security, Women, Peace and Security Index 2021/2022 21

<sup>&</sup>lt;sup>22</sup> https://www.forbes.com/advisor/investing/cryptocurrency/best-crypto-exchanges/

<sup>&</sup>lt;sup>23</sup> Ycharts.com, Average Bitcoin Transaction Fee,

Energy Consumption Index<sup>24</sup> this does not compare well with more traditional banking facilities; The carbon footprint of Visa Transactions is estimated to be 2,216 transactions per 1kg of Carbon Dioxide released<sup>25</sup>.

Other Crypto Currencies are not as heavy on CO2 production, for example Ethereum is probably the second most well known crypto currency. A single Ethereum transaction as of December 2021 was 102.38 kilograms of CO2 which is better than Bitcoins' 680kg but still poor compared to Visa. To address this Ethereum recently completed "the merge" moving from a proof of work system to proof of stake. It is estimated this has reduced power consumption by over 99%. 26

As an economic project Bitcoin also has a problem with capacity; Bitcoin can only process around 3 payments a second and while this could theoretically be increased by changing the source code on the network there is a lot of resistance to making this required change.<sup>27</sup> In contrast the Visa Network can make 24,000 transactions per second.<sup>28</sup>

More Recently public and press coverage of Bitcoin has focused on it's use as a store of wealth or appreciating asset supposedly a guaranteed way to avoid the effects of inflation as the number of Bitcoin that can exist is limited Bitcoin underlying code is programmed to ensure that the total number of Bitcoins in existence will never exceed 21 million<sup>29</sup>. This store of wealth function is also part of the financial picture of how Bitcoin functions. How does Bitcoin compare to traditional currency and the banking system as a store of wealth?

In Australia interest rates earned are tied to inflation via the RBA, however interest earned is generally under inflation as the banks need to earn a profit and have costs so if you invest your money in a bank deposit long term your wealth when adjusted to inflation will decline. In Australia because of the regulation of banks the actual original deposit itself are generally considered 100% safe due to the government guarantee discussed further in the banks section of this discussion.

This loss of capital caused by inflation is exacerbated in developing and volatile economies where the real value of money in banks can decline faster and in times of economic unrest can decline rapidly. In some cases investors capital itself may be eroded rapidly or even lost. For example many South American countries have inflation of around 30% with 83% inflation recently recorded in Argentina. 30 Zimbabwe inflation recently hit 280% 31

However Bitcoin is also very volatile and there has been a lot of press about recent falls and this is an issue if you are looking at Bitcoin as a store of wealth, Bitcoin is \$31,048 AUD today this is roughly the same as 18Dec 2020 and well down from it's peak of \$87,843 12 Nov 2021. And while pro Bitcoin commentators point to the 21 Million limit for Bitcoin but as Zeke Fox points out "Just because the

<sup>&</sup>lt;sup>24</sup> Bitcoin Energy Consumption Index, digiconomist.net

<sup>&</sup>lt;sup>25</sup> Robin Shcer, As cryptocurrency becomes mainstream, its carbon footprint can't be ignored, https://www.downtoearth.org.in/blog/environment/as-cryptocurrency-becomes-mainstream-its-carbon-footprint-can-t-be-ignored-81118, downloaded Dec 10<sup>th</sup> 2022

 $<sup>^{26}</sup>$  DeVries, Cryptocurrencies on the road to sustainability: Ethereum paving the way for Bitcoin, digiconomist.net

<sup>&</sup>lt;sup>27</sup> Mike Hearn, "The Resolution of the Blockchain Experiment (Links to an external site.)" (2016)

 $<sup>{}^{28}\</sup> Crypto.com, A\ Deep\ Dive\ Into\ Blockchain\ Scalability, \\ \underline{https://crypto.com/university/blockchain-scalability#:^:text=While%20Visa%20can%20process%20up,capability%20to%20achieve%20mass%20adoption, downloaded 10^{th}\ December\ 2022.$ 

<sup>&</sup>lt;sup>29</sup> Nigel Dodd, "The Social Life of Bitcoin" (2018) 35 Theory, Culture & Society 2018, 37 [3]

<sup>&</sup>lt;sup>30</sup> tradingeconomics.com/country-list/inflation-rate?continent=america

<sup>31</sup> Ibid

supply of something is limited doesn't make it valuable – only 21 million VHS tapes of Pixar's Toy Story were ever made, and you can get one on EBay for \$US3."<sup>32</sup>

History could end up proving that this recent Covid period is an anomaly in terms of Bitcoin prices and volatility; during this period many assets have had unexpected price rises. If you remove the Covid period from 2020 to 2022 then Bitcoin looks more attractive as a store of wealth showing long term (relatively) stable growth.

In any event using Bitcoin as a Store of Wealth this is contrary to what Satoshi Nakamoto intended for Bitcoin anyway, he only references the lower costs and benefits of *transacting*<sup>33</sup> with opposing parties without any intermediaries. There is no discussion by Nakamoto of Bitcoin becoming a store of wealth, This development of using Bitcoin to store wealth only came later.

Another drawback with Cryptocurrencies is that there is little or no recourse in the case of Fraud and Theft, the Dao hack with Ether is an anomaly where the Ether communities wound back the chain of blocks to undo the fraud and so there was recourse but this is not the normal way for Cryptocurrencies to handle illegal behaviour. There is some progress on putting in place Insurance34 to help protect digital assets35 but I wonder is the recent set of failures of cryptocurrency exchanges36 will set back this progress.

# Bitcoin as a social or Political Experiment

While Satoshi Nakamoto's paper did not discuss any anti-government or other motive beyond creating "an electronic payment system" there are some commentators who believe that Bitcoin is part of a larger political shift. According to the Satoshi Nakamoto Institute "Satoshi did not build Bitcoin in a vacuum...he stood upon the shoulders of cryptographic giants and free software gurus....innovators seeking to use cryptographic and open source software to bring freedom to an unfree world" 8.

So possibly Nakamoto's motives did have some political roots; certainly there are early papers on block chain and cryptography based financial systems that did write about the potential for these systems to have political impact for example in 1988 Tim May said [crypto currencies] "will alter completely the nature of government regulation, the ability to tax and control economic interactions" Or later in 1993 Eric Hughes wrote in his Cypher Punk Manifesto "We must defend

<sup>&</sup>lt;sup>32</sup> It was supposed to be a bitcoin oasis but reality set in, Zeke Fox, AFR Nov 9<sup>th</sup> 2022

<sup>&</sup>lt;sup>33</sup> Bitcoin a Peer-to-Peer Electronic Cash System, Nakamoto, Materials [1],[2]

<sup>&</sup>lt;sup>34</sup> Zuckerman, Adam, Insuring Crypto: The Birth of Digital Asset Insurance (December 29, 2020). University of Illinois Journal of Law, Technology and Policy, Forthcoming, Available at SSRN:

https://ssrn.com/abstract=3756619 or http://dx.doi.org/10.2139/ssrn.3756619

<sup>&</sup>lt;sup>35</sup> tradingeconomics.com/country-list/inflation-rate?continent=america

<sup>&</sup>lt;sup>36</sup> Various but see: The Economist, The failure of FTX and Sam Bankman-Fried will leave deep scars, <a href="https://www.economist.com/briefing/2022/11/17/the-failure-of-ftx-and-sam-bankman-fried-will-leave-deep-scars">https://www.economist.com/briefing/2022/11/17/the-failure-of-ftx-and-sam-bankman-fried-will-leave-deep-scars downloaded 11th Dec 2022.</a>

<sup>&</sup>lt;sup>37</sup> Bitcoin a Peer-to-Peer Electronic Cash System, Nakamoto, Materials [2]

<sup>&</sup>lt;sup>38</sup> Satoshi Nakamoto Institute, About, https://nakamotoinstitute.org/about/

<sup>&</sup>lt;sup>39</sup> May, Timothy, The Crypto Anarchist Manifesto, 1988, <a href="https://nakamotoinstitute.org/crypto-anarchist-manifesto/">https://nakamotoinstitute.org/crypto-anarchist-manifesto/</a> (this paper is listed on "The Nakamoto Institute" as possible background work that Nakamoto built his Bitcoin paper from)

our own privacy if we expect to have any. We must come together and create systems which allow anonymous transactions to take place. "<sup>40</sup>

By operating outside of these restrictions Bitcoin can and has at times<sup>41</sup> changed the level of control Government has over their citizens potentially effecting the social fabric of society.

In her paper Natile Discusses the supposed link between financial inclusion and development, this is a political impact without being the perhaps more extreme anacharchist end of political impacts like Tim May and his belief (or hope) that Cryptocurrencies "alter completely the nature of government" Natile looks at the theory that people who do not have ready access to financial infrastructure can improve their livelihoods, particularly in countries with limited infra-structure and resources." Natile paper is on the implementation of M-Pesa and she concludes that M-Pesa was not as successful as it perhaps could have been (Natile's paper was based on M-Pesa an electronic token that was aggressively implemented in Kenya, while not Bitcoin M-Pesa is also a cryptocurrency).

I am not sure I agree with some of her reasoning for example her conclusion that the risks of using the system were transferred to the users and that this was detractor.<sup>44</sup> However financial inclusion is not the only way that we can view Bitcoin as a Social Project.

In most if not all developed economies Governments and Government agencies control what we buy to some degree for example drugs, alcohol, tobacco & pornography. Some Governments have other controls in place for example this may include border controls severely limiting what you can buy outside of your country (for example North Korea) or limited by sanctions (again North Korea but more recently Russia) these controls can be quite prohibitive.

By using Bitcoin people can potentially bypass these restrictions and so the control of the political systems of their country. Early on perhaps not many countries understood or had surveillance and law enforcement capability with Bitcoin but these days most countries have a good understanding of Bitcoin and the ability to check and monitor Bitcoin transactions.<sup>45</sup>

The ability to short circuit privacy and tax issues was one of the big drawcards of Bitcoin initially <sup>46</sup> but Bitcoin has not proved to alter the nature of government regulation as Tim May had hoped, infact more recently it has been shown that due to the nature of the blockchain transactions can be

<sup>&</sup>lt;sup>40</sup> Hughes, Eric, A Cypherpunk's Manifesto, 1993, <a href="https://nakamotoinstitute.org/cypherpunk-manifesto/">https://nakamotoinstitute.org/cypherpunk-manifesto/</a> (this paper is listed on "The Nakamoto Institute" as possible background work that Nakamoto built his Bitcoin paper from)

<sup>&</sup>lt;sup>41</sup> For example Silk Road https://www.investopedia.com/terms/s/silk-road.asp#:~:text=What%20Was%20Silk%20Road%3F,by%20the%20FBI%20in%202013. Also https://www.justice.gov/usao-sdny/pr/us-attorney-announces-historic-336-billion-cryptocurrency-seizure-and-conviction

<sup>&</sup>lt;sup>42</sup> May, Timothy, The Crypto Anarchist Manifesto, 1988, <a href="https://nakamotoinstitute.org/crypto-anarchist-manifesto/">https://nakamotoinstitute.org/crypto-anarchist-manifesto/</a> (this paper is listed on "The Nakamoto Institute" as possible background work that Nakamoto built his Bitcoin paper from)

<sup>&</sup>lt;sup>43</sup> Digital Finance Inclusion and the Mobile Money "Social" Enterprise, Serena Natile, (2020) 45 Historical Social Research 74

<sup>&</sup>lt;sup>44</sup> Ibid, Conclusion

<sup>&</sup>lt;sup>45</sup> For Example <a href="https://www.justice.gov/usao-sdny/pr/us-attorney-announces-historic-336-billion-cryptocurrency-seizure-and-conviction">https://www.ato.gov.au/individuals/investments-and-assets/crypto-asset-investments/</a>

<sup>&</sup>lt;sup>46</sup> Numerous but for example see Nigel Dodd, "The Social Life of Bitcoin" (2018) 35 Theory, Culture & Society 2018, 36 [1]

traced quite clearly. Many Governments have been talking about changing the way that it regulates Bitcoin and Cryptocurrencies generally but this is not because of this wholesale shift in the way the world works that early writers envisioned. New Regulations are looking at ways to protect investors who have lost money in Cryptocurrency speculations and/or exchange collapses.

Bitcoin has also not proved to be outside the Taxation system either with most countries well aware of what Crypto currencies are and they have the technological ability to monitor and tax cryptocurrency transactions in just the same way as transactions on the traditional banking network.

Overall Bitcoin has not succeeded as a political or social experiment and I think we should analyse Bitcoin to see if it has achieved the stated goal of it's creator to "an electronic payment system" 47.

# Conclusion

As a financial tool Bitcoin is most advantageous for small international transactions as well as when transacting with vendors that may not want to or be able to accept Visa and Mastercard or other payment systems like PayPal. Not all vendors are able to access the Visa or Mastercard framework. Paypal is more widely accessible by vendors but this is also more costly. SWIFT and other direct international bank transfer systems are also expensive for small transactions as well as slow.

As a store of wealth Bitcoins volatility is a detractor but this depends on the context, if you are investing from a politically unstable area or emerging economy Bitcoin may look quite attractive due to the volatility and risk associated with your native currency and local regulation.

Bitcoin does or could have a place and could be successful in cross border transactions based on it's potential functionality. Bitcoin seems particularly attractive between members of the public and small and micro businesses where the cost and/or speed of traditional banking methods are restrictive.

Despite this there are two points that mean the ultimately Bitcoin in it's current form is a failure as an financial medium of exchange:

- 1. The cost both financial and environmental of running the network and computer power required to operate the Bitcoin system are prohibitive.
- 2. Capacity, 3 payments per second is not enough to be a truly global payment network.

In the absence of large changes to the way Bitcoin operates I agree with Felix Martin: "payments technologies... it is here that bitcoin's real potential lies: in its hybrid payments technology."<sup>48</sup> There have already been success in using blockchain technology and smart contracts for example Bricklet in Australia have begun settling real property transactions on a blockchain based platform. <sup>49</sup> as well

<sup>&</sup>lt;sup>47</sup> Bitcoin a Peer-to-Peer Electronic Cash System, Nakamoto, Materials [2]

<sup>&</sup>lt;sup>48</sup> Bitcoin Is Pointless as a Currency, But It Could Change the World Anyway, https://www.wired.com/2014/03/bitcoin-currency-martin/

<sup>&</sup>lt;sup>49</sup> Bleby, Michael, Bricklet uses blockchain to settle housing sales instantly, Australian Financial Review Nov 1<sup>st</sup> 2022

as high profile failures such as the ASX's transition to a blockchain settlement system which it has now abandoned.<sup>50</sup>

There are also places and situations where a bitcoin type non centralised world wide network would be useful and as long as the two problems above can be overcome. This network could be superior to traditional banking in some situations, another quote from Felix Martin: "the distributed public ledger -- which could just as easily be used to process payments denominated in US dollars, or British pounds, or Japanese yen as in bitcoins." And so I think there is merit in a distributed public ledger system and as an economic project it succeeds as a stepping stone that others will hopefully build on overcoming the shortcomings of Bitcoin itself.

<sup>&</sup>lt;sup>50</sup> James Eyers, ASX grip on clearing shaken by blockchain disaster, Australian Financial Review, Nov 17<sup>th</sup> 2022

<sup>&</sup>lt;sup>51</sup> Bitcoin Is Pointless as a Currency, But It Could Change the World Anyway, https://www.wired.com/2014/03/bitcoin-currency-martin/