

Working Paper 38

Cryptocurrencies in Asia and beyond: law, regulation and enforcement

Dorothy Siron and Federico Paesano | May 2022

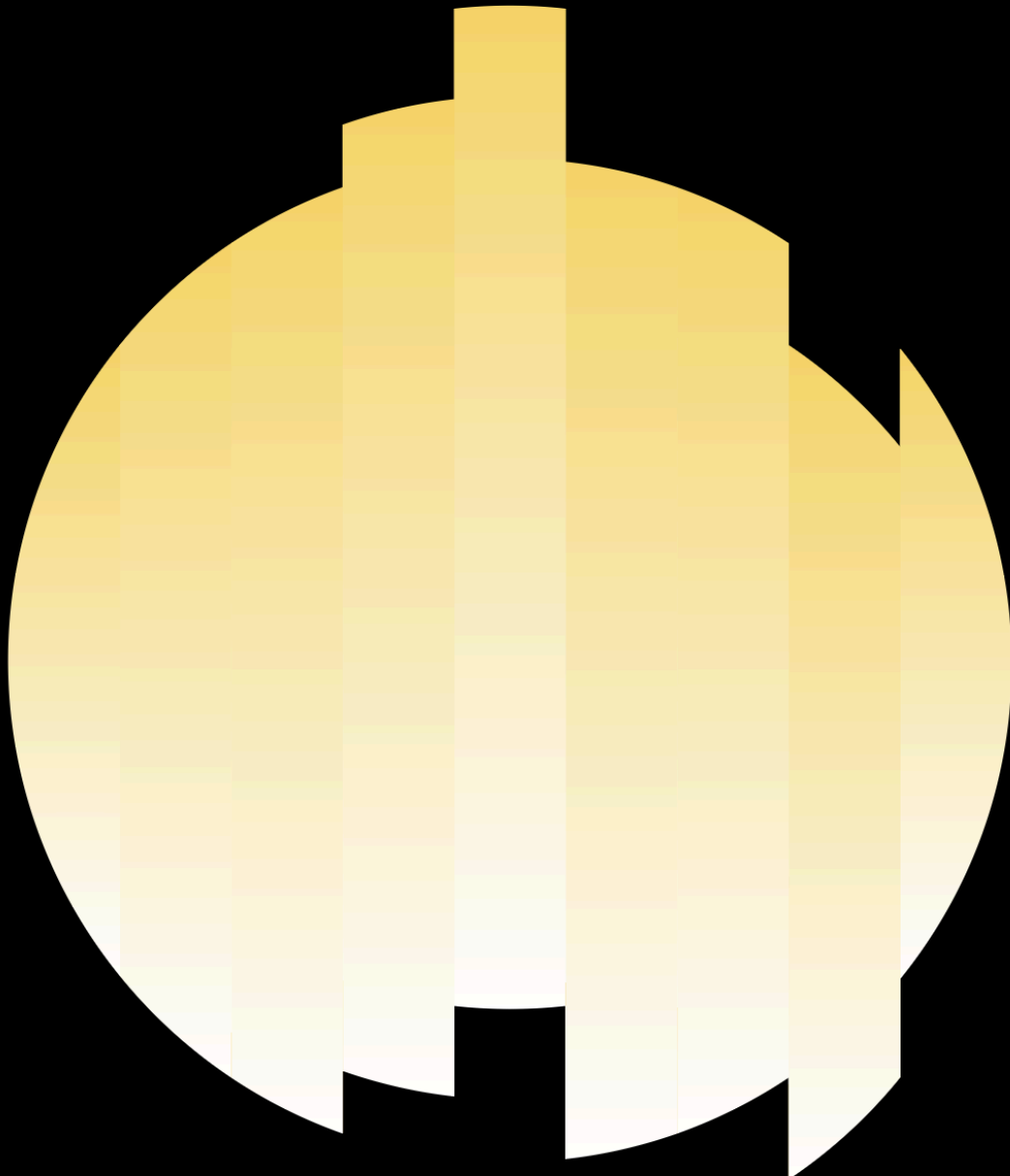


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About this Working Paper

The crypto industry has exploded in recent years, and authorities in different countries have been reacting in very different ways. Some have banned cryptocurrencies, while others are embracing them in varying degrees. Some are working hard to align their anti-money laundering regulations with FATF standards, while others are turning a blind eye. A few countries have confiscated huge quantities of crypto assets linked to crime and money laundering. Others are at square one in terms of enforcement, risking becoming a hub for crypto crime and money laundering and have posed a serious vulnerability in the world's financial system.

This Working Paper draws on a detailed analysis of how selected countries are addressing legal, regulatory and enforcement issues around cryptocurrencies and other virtual assets. The analysis is focused on Asia, but set in the context of global trends in crypto law, regulation and enforcement. It explores critical questions that will shape policies around virtual assets at the corporate, national and international levels:

- What is working in terms of crypto regulation and enforcement?
- What are the implications of different policy choices on crypto assets – for the industry, for the countries themselves and for global financial integrity as a whole?
- What would the crypto wave possibly bring next?

The Paper also highlights broader developments needed to bring light and clarity to laws, policies and practices around the crypto industry, such as collaboration between both market players and governments.

Jurisdictions touched upon in this Working Paper alphabetically include Bhutan, El Salvador, Hong Kong SAR (or interchangeably Hong Kong)¹, India, Indonesia, Japan, Kazakhstan, Malaysia, Myanmar, Russia, Singapore, South Korea, the Philippines, the People's Republic of China (China or the PRC), Thailand, Ukraine, and Vietnam.

A list of key terms and abbreviations have been prepared in the Annex to this Working Paper for the readers' easy reference.

This Working Paper is a collaboration between Dorothy Siron, Co-Managing Partner, Zhong Lun Law Firm LLP and Federico Paesano, Senior Financial Investigation Specialist, Basel Institute on Governance. Dorothy Siron provided the bulk of the analysis and discussion, while Federico Paesano provided a selection of case studies and was co-author of the seven recommendations contained in section 4. The collaboration was facilitated by the International Academy of Financial Crime Litigators, an independent, non-partisan global centre that shapes and advances financial crime litigation practices for the future.

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¹ Hong Kong SAR is officially known as the Hong Kong Special Administrative Region of the People's Republic of China.

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1 Navigating blind in the crypto revolution

On the topic of virtual assets (VAs), the popularity of which has been further driven by the COVID-19 pandemic, there seems to be three main voices among nations and the public: VA believers, sceptics and the indifferent/disinterested crowd.

One might have thought like Citadel founder Ken Griffin in 2017, that “Bitcoin right now has many of the elements of the tulip bulb mania we saw back hundreds of years ago in Holland...These bubbles tend to end in tears. And I worry about how this bubble might end.” Like Griffin, one might have realised only recently that they have been “in the naysayer camp over that period of time. But the crypto market today has a market capitalization of about \$2 trillion in round numbers, which tells you that [they] haven’t been right on this call.”²

Some, like the Swedish information entrepreneur Rick Falkvinge, might go as far as to assert that “Bitcoin will do to banks what email did to the postal industry.”³

As in any other evolutionary development, there can be no absolute right or wrong. How can technologies and inventions that aim to assist with daily lives be inherently improper? After all, fiat currencies were originally created to facilitate trades, which might also have the collateral effect of facilitating some undesirable illicit activities. Ultimately it would depend on both how they are utilised and how laws and regulations are drafted and implemented.

To better illuminate the latter aspect, this Working Paper offers analysis and case studies of how certain jurisdictions treat VAs, with a focus on cryptocurrencies, and discuss what might possibly be some solutions.

1.1 Charms and curses of VAs

Imagine everything at your fingertips and under your immediate control. That is the charm of VAs, which is largely affiliated with the adoption of Decentralised Finance (DeFi) and Distributed Ledger Technology (DLT).

The commonly known blockchain technology is a type of DLT. Data entered in the distributed ledgers and blockchain are irreversible, real-time and publicly accessible, evidencing every single movement of the VAs.

DLTs such as the blockchain are expensive and data/energy consuming. However, they achieve what, in the modern world, is seen as a fundamental goal: removing middlemen and creating a trustless system where nobody alone can become a singular point of failure. They do so by replicating the same ledger in hundreds or thousands of different locations. DLTs reach consensus over the correct version of the ledger, in case of discrepancies or malicious attacks, through majority. It is

2 Young, Martin. (2 March 2022). *Billionaire admits he was wrong about Bitcoin as Citadel Securities looks to crypto markets*. Cointelegraph. <https://cointelegraph.com/news/billionaire-admits-he-was-wrong-about-bitcoin-as-citadel-looks-to-crypto-markets>.

3 Beatty, Andrew. (3 June 2021). *Beyond Bitcoin and Blockchain: What DLT May Mean for Banks*. Finextra. <https://www.finextra.com/blogposting/20406/beyond-bitcoin-and-blockchain-what-dlt-may-mean-for-banks>.

also fast and accessible in terms of both time and space, drawing in a substantial amount of institutional and retail investors. These features alleviate the pain points of traditional financial transactions. The transaction cost of a blockchain remittance of over USD 1.1 billion can be as low as around USD 0.48.⁴

The use and popularity of VAs have triggered a lot of ancillary industries such as the following DeFi services:⁵

- DeFi insurance is designed to protect VAs against market volatility and thefts. ‘Fund’, the Malaysia-based BCMG Genesis Bitcoin Fund-I professed itself to be the pioneer in Southeast Asia to provide insured institutional crypto products in March 2021.⁶
- Stablecoins are VAs that “aim to maintain a stable value relative to a specified asset, or a pool or basket of assets” which essentially mean that they could be backed by fiat currencies, financial instruments, commodities and other VAs.⁷
- Decentralised lending allows lenders to lend funds and earn interest by using their VAs as collateral from which to borrow and lend funds against.

However, accompanying those charming attributes are some unavoidable curses. It is a slippery slope to conclude that the inalterability of data entered in the distributed ledger alone can singlehandedly eliminate errors, inaction, fraud or other technological crimes.

DLT, by being decentralised, disintermediated and pseudonymous/anonymous, becomes a convenient vehicle for money laundering, terrorist financing and financing of proliferation of weapons of mass destruction. According to the report of Chainalysis, a blockchain data firm, crypto money laundering rose by 30% in 2021, involving USD 8.6 billion of cryptocurrencies.⁸

Typical types of crypto fraud include initial coin offering (ICO) scams, hacks, rug pulls, pump and dump, Ponzi schemes, and phishing. It is safe to say that irreversible real-time cross-border transactions done at lightning speed on a multitude of platforms make transfers faster and harder to trace. That is not to say that there have not been some very successful recoveries of note, as the following two case studies illustrate:

4 Ziter, Russin. (17 February 2022). *Vietnam, inward remittance, and the power of blockchain*. Lexology. <https://www.lexology.com/library/detail.aspx?g=f357b7b6-1a44-427f-9261-59e7acfe57e2>.

5 Tan, Malcom. (19 October 2021). *How Singapore’s crypto regulations are shaping its DeFi space*. Forkast. <https://forkast.news/singapore-crypto-regulations-shaping-defi/>.

6 Young, Martin. (9 March 2021). *Southeast Asia’s first Bitcoin fund launches to meet local institutional demand*. Cointelegraph. <https://cointelegraph.com/news/southeast-asia-s-first-bitcoin-fund-launches-to-meet-local-institutional-demand>.

7 The Financial Stability Board. (13 October 2020). *Regulation, Supervision and Oversight of “Global Stablecoin” Arrangements: Final Report and High-Level Recommendations at 5, 9 and 10*.

8 BBC news. (26 January 2022). *Crypto money laundering rises 30%, report finds*. <https://www.bbc.com/news/technology-60072195>.

Case study 1: Hong Kong's Bitfinex hack and the US's record-breaking financial seizure

In 2016, almost 120,000 bitcoins, at the time worth about USD 70 million, were stolen by hackers from the exchange platform Bitfinex, based in Hong Kong. Bitfinex was, and still is, one of the largest crypto exchanges in the world. The thieves infiltrated the exchange and performed more than 2,000 unauthorised transactions that transferred all the bitcoins to a single wallet.

In early 2017, small amounts of bitcoins were transferred from the single wallet to the marketplace AlphaBay, hosted in the dark web, to hide their origin and initiate the laundering process. However, in July of the same year, the FBI, in cooperation with other jurisdictions and Europol, was able to shut down AlphaBay. When law enforcement got hold of AlphaBay's servers, they were able to see through the millions of transactions performed by the dark market, including vendors' and clients' details, internal transaction logs, chats and registered physical addresses. Among these were the ones used to launder the stolen bitcoins.

This is probably how the FBI managed to connect the dots and identify two individuals, Ilya Lichtenstein and Heather Morgan, a couple from New York.

Even though it is believed that the couple was not directly involved in the hack, and those who perpetuated the theft are still at large, in February 2022 they were charged with conspiring to launder the cryptocurrency, which was by then worth the astronomical amount of USD 3.6 billion. But where were those bitcoins?

Despite the fact that small sums were used to purchase gold, NFTs, Walmart gift cards and other amenities, and that around 25,000 bitcoins were laundered and then deposited into financial accounts controlled by the couple, the remaining bitcoins, almost 94,000, were left untouched, sitting in dormant addresses that the couple hoped to be able to spend one day.

Most criminals make mistakes, sooner or later. And the couple did many. Were they just careless, or maybe too confident they had covered their traces? We don't know, but those mistakes allowed investigators to put the pieces of the puzzle together and track them down.

The complaint explains how the accused took advantage of different techniques like chain hopping and the use of pseudonymous accounts with cryptocurrency exchanges to cover their traces and launder the stolen funds. Even though, at a first glance, those accounts seemed completely unrelated, they all had a few things in common; some used the same Indian email provider and, oddly, they all pointed to the same IP address. When the compliance team at the exchange demanded additional know your customer (KYC) information, many of those accounts were abandoned.

Trusting that they had successfully obfuscated their real identities using pseudonymous account, the couple made a bold move. They withdrew coins from those covert addresses and consolidated them into a single Bitcoin address. They later transferred the money from this address to an account at a US-based bitcoin exchange, Coinbase, for which Lichtenstein had previously provided real KYC information. According to the complaint, the information included "photographs of Lichtenstein's California driver's license and a selfie-style photograph," and "the account was registered to an email address containing Lichtenstein's first name."

Even though this and several other mistakes might have given away the criminals' identity, another question needs to be answered: how were law enforcement able to find and seize the cryptocurrency? Unlike tangible assets, the seizure of something immaterial like Bitcoin requires the investigator to find the private keys⁹ associated with the addresses where they are stored, and use them to transfer the assets to a wallet controlled by the investigators.

Investigators were, therefore, trying to find the private keys associated with the addresses identified during the case. What was clear probably even before the arrest was that the suspects were storing sensitive documents and files in a cloud service¹⁰. Those services, maintained by private companies, are susceptible to subpoenas and can be served seizure orders. This is what was done and investigators obtained not only incriminating information that linked the suspects with the money laundering activity, but also the private keys of the wallet holding the stolen funds.

It is not clear from the indictment how the file containing the private keys was decrypted. What is clear is that the file proved crucial in seizing USD 3.6 billion in bitcoin, the largest financial seizure ever done by the US Department of Justice.¹¹

Case study 2: Japan's Coincheck and seizing stolen funds

On 26 January 2018, Japanese cryptocurrency exchange Coincheck suffered a cyberattack in which it lost close to USD 533 million. The hack targeted a cryptocurrency called NEM, which was held by customers with Coincheck. How did hackers get access to the cryptocurrency? They penetrated the exchange through a malicious email attachment that worked as a trojan horse and allowed criminals to steal the exchange's private keys.

The problem, like in many similar cases, was not caused by a deficiency of the NEM cryptocurrency itself, but by Coincheck's weak security policies. Good practices and standard security policies state that custodial entities like exchanges should keep customers' funds offline in a so-called "cold wallet". This is gapped from internet access. It looks like this was not the case with Coincheck.

It is surprising that those practices were not implemented given the fact that another Japan-based exchange called Mt. Gox, which by 2013 and into 2014 was handling over 70 percent of all bitcoin transactions worldwide, had lost approximately 850,000 bitcoins belonging to customers due to a similar attack. Although 200,000 Bitcoins were later recovered in this case, Mt. Gox had no alternative but to file for bankruptcy, leading to its liquidation in April 2014. This however appeared not to serve as a wake-up call for Coincheck.

9 A cryptocurrency wallet consists of a set of public addresses and their associated private keys. Anyone can deposit cryptocurrency in an address, but funds cannot be spent from an address without the corresponding private key. Private keys constitute control and ownership of cryptocurrency

10 A Cloud service is a service delivered on demand to customers over the internet and offer easy access to applications and resources, without the need for internal infrastructure or hardware. An example is 'cloud storage' an off-site storage place that is maintained by a third party and accessed remotely.

11 See The United States Department of Justice. (8 February 2022). *Two Arrested for Alleged Conspiracy to Launder \$4.5 Billion in Stolen Cryptocurrency*. <https://www.justice.gov/opa/pr/two-arrested-alleged-conspiracy-launder-45-billion-stolen-cryptocurrency>; c.f. Namcios. (8 March 2022). *How law enforcement seized 94,000 bitcoins from Bitfinex*. Bitcoin Magazine. <https://bitcoinmagazine.com/technical/how-authorities-found-bitfinex-bitcoin>

One month after the Coincheck hack, a website in the dark web started offering NEM at a price much lower than usual. Experts believe the website was created by the same hackers who stole the funds.

On 21 January 2021, Japanese investigators announced that 31 people had been charged for exchanging NEMs for other digital currencies with the knowledge that they constituted proceeds of crime. However, those individuals are not believed to be the perpetrators of the heist. The identities of the hackers remain unknown.

Just like in many other crypto investigations, this case illustrates the vital role of Virtual Asset Service Providers (VASPs) in recovering stolen VAs. VASPs sit at the intersection between the anonymity of crypto transactions and the “regulated world”. No matter how much efforts criminals put into covering their traces with complex laundering schemes in unregulated waters, at some point they will need to turn their stolen assets into fiat currency. This is where they surface and are at the reach of law enforcement.

It is interesting to notice that the provision used by the investigative agency to freeze and confiscate the funds was a pretrial protective order under the Japanese Organized Crime Punishment Act. This can prevent the accused from disposing of alleged proceeds of crime even before the public prosecutor’s indictment and the commencement of a criminal trial.¹²

1.2 Blocks of blockchain: snapshot of the regulatory landscape

There are countless types of VAs, including but not limited to securities tokens, e-money tokens, utility tokens, exchange tokens and non-fungible tokens (NFTs). Each, depending on their functions, warrants different treatments and deserves its separate discussion.

This Working Paper mainly focuses on cryptocurrencies. Some consider that it is rather a misnomer to categorize cryptocurrencies as a kind of “currency” as cryptocurrencies have no intrinsic value and can act simply as a digital store of value like other intangible assets. To facilitate discussion, Jan Lanksy, a scholar at the University of Finance and Administration in Prague, defines cryptocurrencies essentially as “decentralised digital currencies”.¹³

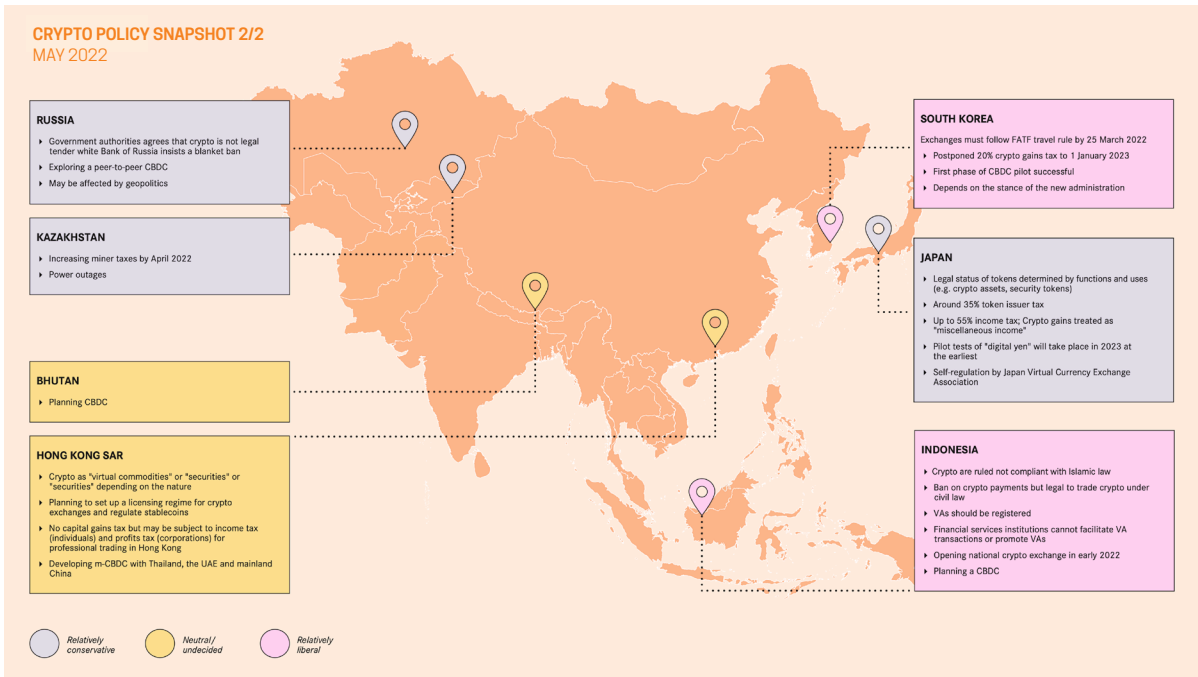
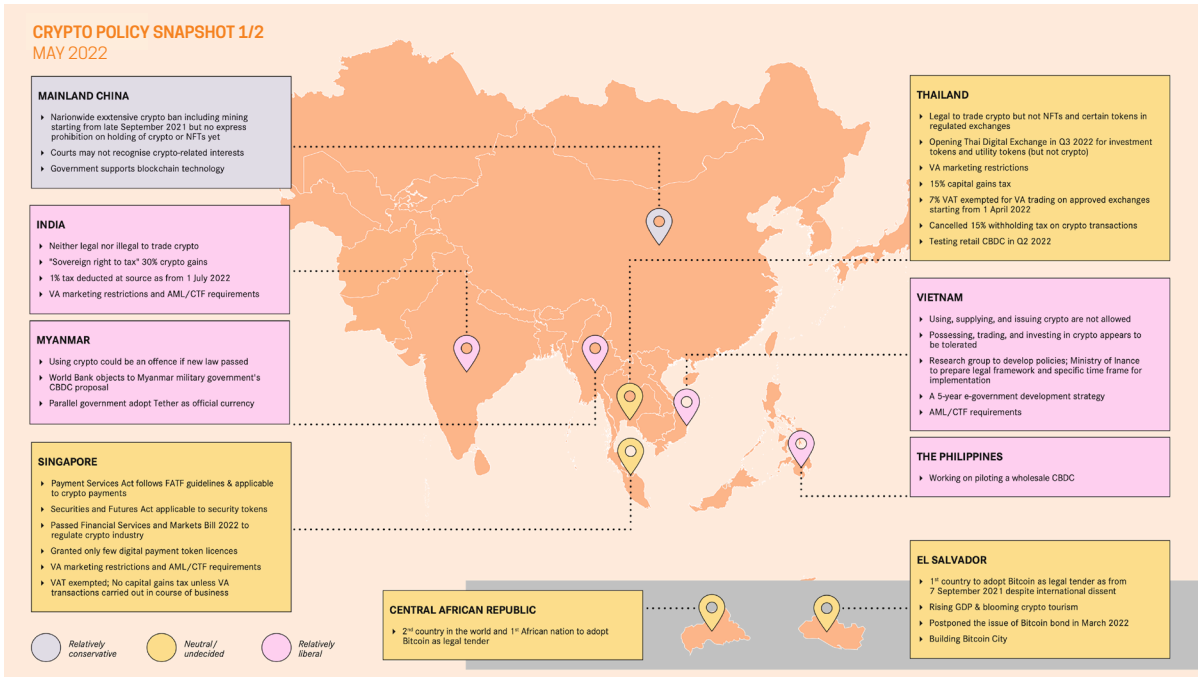
In the face of the prevalence of VAs, jurisdictions will have to answer two questions sooner or later on cryptocurrencies:

- To ban or not to ban?
- If a blanket ban is unnecessary, how to regulate it?

12 Sources and further reading: Kanae, Hiroyuki and Miyake, Hidetaka. (2021.) *Case Study of the Coincheck Cryptocurrency Hack*. Anderson Mori & Tomotsune. https://www.amt-law.com/en/publications/detail/publication_0022595_en_001; Tsuchiya, Yoichi and Hiramoto, Naoki. (2021.) 'How cryptocurrency is laundered: Case study of Coincheck hacking incident.' *Forensic Science International, Reports* (vol 4). <https://www.sciencedirect.com/science/article/pii/S2665910721000724>.

13 Lanksy, Jan. (January 2018). *Possible State Approaches to Cryptocurrencies*. *Journal of Systems Integration*. 2018/1. At 19. <https://pdfs.semanticscholar.org/c14a/cbbb00b5baee7f10b24d224d429ee6b39e0e.pdf>.

Let us imagine a spectrum of how jurisdictions treat cryptocurrencies with the most conservative ones on the left and the most liberal ones on the right. China would probably be on the far left while El Salvador sits on the far right. The crypto maps below are the centrepieces to the first half of this Working Paper, describing the current crypto landscape of the Asian Region.



1.2.1 China's near-blanket ban

Given China's long history of capital control, the extensive ban on cryptocurrencies effective from 24 September 2021 might not have come as a surprise to many.

The Chinese government has from time to time issued circulars reinforcing the crypto ban.

- The first Bitcoin transaction took place on 12 January 2009.¹⁴ The Chinese government prohibited all Chinese banks from dealing in Bitcoin by the Notice on Guarding Against the Risks of Bitcoin in December 2013 when Bitcoin was still underappreciated by the world.¹⁵ It went on to further halt the ICO frenzy by the Announcement on Prevention of Financing Risks of ICOs in September 2017.¹⁶ The Announcement on Prevention of Speculation Risks of Virtual Currency Transactions in May 2021 further forbade financial institutions from partaking in any cryptocurrency-related activities.¹⁷
- As a prelude to the nationwide near-blanket ban effective from 24 September 2021, 11 Chinese government authorities jointly issued the Notice regarding the Rectification of Virtual Currency "Mining" Activities (Fa Gai Yun Xing [2021] No. 1283) (Circular No. 1283) to banish crypto mining by placing it in the category of "elimination" under the Catalogue for Guiding Industry Restructuring (2019 Edition), penalizing illicit power supply, and withdrawing financial support for the crypto mining projects.^{18,19} The policy rationale would be that crypto mining is energy-intensive and would hinder China from reaching peak emissions before 2030 and attaining carbon neutrality by 2060. Currency broker OANDA analyst Craig Erlam claimed that China's crypto mining ban has driven USD 6 billion of annual mining revenue away to other popular mining regions such as Kazakhstan, Russia and the US.²⁰ Having said that, Chinese cybersecurity firm Qihoo 360 estimated in its November 2021 report that there were on average 109,000 active underground crypto mining addresses mostly in Guangdong, Jiangsu, Zhejiang and Shandong.²¹

14 Peterson, Anrea. (3 January 2014). *Hal Finney received the first Bitcoin transaction. Here's how he describes it.* The Washington Post. <https://www.washingtonpost.com/news/the-switch/wp/2014/01/03/hal-finney-received-the-first-bitcoin-transaction-heres-how-he-describes-it/>.

15 BBC (5 December 2013). *China bans banks from handling Bitcoin trade.* BBC.com. <https://www.bbc.com/news/technology-25233224>

16 Feng, Coco. (25 February 2022). *Cryptocurrency fundraising is a criminal offence in China under new legal interpretation from Supreme Court.* South China Morning Post. <https://www.scmp.com/tech/policy/article/3168346/cryptocurrency-fundraising-criminal-offence-china-under-new-legal>.

17 Linklaters Zhao Sheng. (14 February 2022). *China's Crypto Ban Extends to a Wider Range of Crypto-based Activities.* https://lpscdn.linklaters.com/knowledge/-/media/digital-marketing-image-library/files/06_ckp/2022/february/20220214-llzs-china-s-crypto-ban-extends-to-a-wider-range-of-crypto-based-activities.ashx?rev=f5878c17-ac2a-4941-a126-fe98570fdeeb&extension=pdf.

18 发改运行〔2021〕1283号

19 Feng, Coco. (25 February 2022). *Cryptocurrency fundraising is a criminal offence in China under new legal interpretation from Supreme Court.* South China Morning Post. <https://www.scmp.com/tech/policy/article/3168346/cryptocurrency-fundraising-criminal-offence-china-under-new-legal>.

20 Wong, Samantha. (26 October 2021). *The Potential and Pitfalls of Cryptocurrency.* Australian Institute of International Affairs. <https://www.internationalaffairs.org.au/australianoutlook/the-potential-and-pitfalls-of-cryptocurrency/>.

21 Sigalos, MacKenzie. (19 December 2021). *Inside China's underground crypto mining operation, where people are risking it all to make bitcoin.* CNBC News. <https://www.cnbc.com/2021/12/18/chinas-underground-bitcoin-miners.html>.

- On 24 September 2021, the People’s Bank of China (PBOC) jointly released the Circular on Further Preventing and Handling the Risks Concerning Speculation in Virtual Currency Trading (Yin Fa [2021] No. 237)²² (Circular No. 237) with nine other government authorities.²³ Circular No. 237 imposed an extensive ban on domestic crypto activities by i) defining a “virtual currency” in a non-exhaustive manner, ii) banning Tether (which is a type of stablecoin), and iii) deeming all cryptocurrency-related business activities “illegal financial activities”.²⁴ It also has an extraterritorial effect on offshore businesses providing online crypto services to Chinese residents.²⁵
- Following the interpretation issued by the Supreme People’s Court on 24 February 2022 which took effect in March 2022 as the Chinese government’s effort to maintain “national financial security and stability”, cryptocurrency fundraising, regardless of its forms and inclusive of online lending and financial leases, depending on the amount raised, could put someone behind bars for over 10 years in “extremely serious” cases where over CNY 50 million, a loss of at least CNY 25 million or 5,000 people are involved.²⁶
- Despite the foregoing restraints on cryptocurrencies, it appears that China is still one step away from a complete ban as there seems to be no express prohibition on the holding of cryptocurrencies.²⁷

Chinese courts have ruled that the legal system does not recognise or protect crypto-related interests. This is despite a few seemingly contradictory judicial voices, which could be a result of the national and regional policies and interpretations of the laws at that time:

- In May 2019, before the Chinese government ordered a ban on cryptocurrencies and crypto mining, Beijing Phonf Marketing Technology (Beijing Phonf) entered into three mining agreements totalling approximately USD 1.6 million with Zyc Blockchain Technology (Zyc Blockchain) for the deployment of mining machines in Liangshan Yi Autonomous Prefecture. This was a designated “model zone” encouraging business activities, such as energy-hungry mining sites, to consume excessive energy generated. Beijing Phonf sued Zyc Blockchain for monetary compensation for unsatisfactory Bitcoin mining returns. On 15 December 2021, the Chaoyang District People’s Court in Beijing rejected the case by declaring the mining contracts invalid and ordered the relevant government authorities to shut down any remaining

22 银发 [2021] 237号

23 Cyberspace Administration of China, Supreme People’s Court, Supreme People’s Procuratorate, Ministry of Industry and Information Technology, Ministry of Public Security, State Administration for Market Regulation, China Banking and Insurance Regulatory Commission, China Securities Regulatory Commission, and State Administration of Foreign Exchange

24 According to Circular No. 237, a “virtual currency” exists digitally with the application of DLT or other similar technologies and is not issued by an authority authorized to issue currencies.

25 Feng, Coco. (25 February 2022). *Cryptocurrency fundraising is a criminal offence in China under new legal interpretation from Supreme Court*. South China Morning Post. <https://www.scmp.com/tech/policy/article/3168346/cryptocurrency-fundraising-criminal-offence-china-under-new-legal>.

26 Feng, Coco. (25 February 2022). *Cryptocurrency fundraising is a criminal offence in China under new legal interpretation from Supreme Court*. South China Morning Post. <https://www.scmp.com/tech/policy/article/3168346/cryptocurrency-fundraising-criminal-offence-china-under-new-legal>.

27 Wong, Samantha. (26 October 2021). *The Potential and Pitfalls of Cryptocurrency*. Australian Institute of International Affairs. <https://www.internationalaffairs.org.au/australianoutlook/the-potential-and-pitfalls-of-cryptocurrency/>.

mining sites.²⁸

- In another lawsuit in Shandong in August 2021, the plaintiff entrusted the three defendants with CNY 70,000 in 2017 to invest in virtual tokens. The sum was subsequently locked by the PBOC in a trading account due to China's ban on payment institutions supporting crypto transactions in 2018. After the Jinan Intermediate People's Court held that the plaintiff's fraud case did not stand as the locked sum did not enjoy any legal status and subsequently upholding its ruling, the High People's Court of Shandong Province, when reviewing the case, echoed the lower court rulings and commented publicly that "investing or trading cryptocurrency is not protected by law".²⁹
- In contrast, the Shanghai Minhang District People's Court said in a WeChat post in mid-August 2021 that although cryptocurrencies do not have the status of a legal tender, they could be regarded as virtual properties or commodities depending on their nature and be protected as such. Besides, according to a July 2020 Opinion issued by the PRC Supreme Court, the PRC Supreme Court called for improvement of the property rights protection system based on the principle of fairness and justice, especially regarding the protection of new types of rights and interests created by digital currencies, online virtual properties and data.³⁰

Even though the Chinese government has not expressly banned NFTs yet, businesses have been cautious to distance themselves from NFTs by either branding them as "digital collectables" or walking away from them altogether. For example, mega tech companies in China, such as Ant Group, Tencent Cloud and JD Technology, along with the National Copyright Exchange Centre Alliance, the China Academy of Arts, Hangzhou Internet Notary Public Office, CCTV Animation Group and Hunan Museum, entered into the Digital Culture and Creative Industries Self-Regulation Convention on 31 October 2021.³¹ Under this Convention they agreed on, amongst other things, "empowering the real economy, maintaining cyber information security, eliminating virtual currencies, and preventing speculation, financialization risks and money laundering risks".³² On 13 April 2022, the National Internet Finance Association of China, the Securities Association of China and the China Banking Association issued a joint announcement warning of NFT-related risks and listing six industrial guidelines. Two of the guidelines suggested respectively that centralised trading of NFTs and financing support for NFT investments should not be provided.³³

28 Feng, Coco. (16 December 2021). *Beijing court rules bitcoin mining contracts 'invalid', advises local governments to shut down remaining farms*. South China Morning Post. <https://www.scmp.com/tech/big-tech/article/3159910/beijing-court-rules-bitcoin-mining-contracts-invalid-advises-local?module=inline&pgtype=article>.

29 Feng, Coco. (23 August 2021). *Court in China says cryptocurrency 'not protected by law' in ruling that could set a precedent for bitcoin lawsuits*. South China Morning Post. <https://www.scmp.com/tech/policy/article/3146026/court-china-says-cryptocurrency-not-protected-law-ruling-could-set>.

30 Gkritsi, Eliza. (14 September 2021). *Crypto Trading Isn't Protected by Law, Shandong Province High Court Says*. CoinDesk. <https://www.coindesk.com/markets/2021/08/23/crypto-trading-isnt-protected-by-law-shandong-province-high-court-says/>.

31 《数字文创行业自律公约》

32 Gkritsi, Eliza. (2 November 2021). *Ant Group, Tencent, JD.com Sign NFT 'Self-Regulation' Convention*. CoinDesk. <https://www.coindesk.com/policy/2021/11/01/ant-group-tencent-jdcom-sign-nft-self-regulation-convention/>.

33 Gkritsi, Eliza. (13 April 2022). *Chinese Banking Associations Target NFTs*. CoinDesk. <https://www.coindesk.com/policy/2022/04/13/chinese-banking-associations-target-nfts/>.

The near-blanket ban arguably has caused the world to cut ties with clients and talent in mainland China on crypto matters. Hong Kong SAR, as an international financial centre, has always been considered a dominant gateway to and from mainland China in terms of the flow of capital and talent. In addition to having a pool of mainland clients, a lot of Hong Kong businesses also open back offices or research and development centres in mainland China while working closely with mainland tech talent. The crypto crackdown in mainland China has impacted Hong Kong's business environment as many are worried that mere conversations on crypto may be risky.³⁴

The suppression of cryptocurrencies in China may have unintentionally opened the floodgates for the spread of DeFi. In the DeFi world, anonymous coders could be producing financial products on the blockchain for anonymous users. Whilst the action is in principle illegal in mainland China, in practice it could be hard to eliminate. This is because the only way to put a stop to DeFi would be to shut down the whole blockchain, which would likely be located outside of the Chinese government's jurisdiction. The government can only look into the intermediaries, for example, crypto exchanges or over-the-counter crypto stores that connect the blockchain to the off-chain world, and request them to perform KYC and due diligence exercises to verify clients' identity.³⁵

While DeFi is generally considered as an easily accessible option, governments may feel relieved that the crypto economy is not going to fully replace the traditional finance system – in which they are more influential – any time soon due to the complexity of the latter. It is noteworthy that while cryptocurrencies appear to be completely banned in China, the Chinese government is actively investing in blockchain technology and de-linking blockchain from cryptocurrencies. For example:

- The Chinese government has been supporting blockchain consortiums developed by Tencent and Alibaba. These connect data between entities and other non-currency blockchains where they can be used to track and verify data and promise data security.
- In 2020, the Xiong'an New Area in Hebei claimed to be the first place in the world to substantially use blockchain at a city level for development. Blockchain was also used to handle resettlement compensation, salaries to migrant workers and purchase of construction materials.
- PRC President Xi Jinping advocated, at the opening of the second United Nations Global Sustainable Transport Conference in October 2021, the use of blockchain in the transportation industry.
- In the same year, the Shanghai government also awarded a research grant of over USD 5 million to a local DeFi startup called Conflux. This declared itself to be "the only public and permissionless blockchain project backed by the Chinese government".³⁶

34 Gkritsi, Eliza. (18 February 2022). *China Casts Long Shadow Over Hong Kong's Once-Vibrant Crypto Industry*. CoinDesk. <https://www.coindesk.com/layer2/2022/02/17/china-casts-long-shadow-over-hong-kongs-once-vibrant-crypto-industry/>.

35 Che, Chang. (27 October 2021). *DeFi: Can decentralized finance defy China's crypto controls?* SupChina. <https://supchina.com/2021/10/27/defi-can-decentralized-finance-defy-chinas-crypto-controls/>.

36 Pan, David. (14 September 2021). *Shanghai Government Invests \$5M in Blockchain Startup Conflux*. CoinDesk. <https://www.coindesk.com/business/2021/01/12/shanghai-government-invests-5m-in-blockchain-startup-conflux/>.

China has also been conducting trial runs of its central bank digital currency (CBDC), the “e-CNY” at the 2022 Beijing Winter Olympics. It is reported that around 261 million e-CNY wallets had been set up, handling transactions totalling over USD 17.4 billion by the end of 2021. Before the introduction of this digital currency, China was already very much a cashless society due to the mainstream adoption of Alipay or WeChat Pay, which are respectively powered by Alibaba and Tencent and bypass bank deposits. As a result, the PBOC’s control over currency in circulation would be weakened by electronic payments.³⁷

e-CNY allows the government to monitor real-time monetary and economic phenomena and trends. It may also be used to regulate the money supply and control consumers’ behaviours by directing it to be spent on certain goods and services during a specified timeline.³⁸ CBDCs will be further discussed later.

1.2.2 El Salvador’s adoption of Bitcoin as legal tender

El Salvador’s groundbreaking adoption of Bitcoin as its legal tender beside the US dollar officially took place on 7 September 2021. Article 7 of the Salvadoran Bitcoin Law expressly requires that “every economic agent must accept bitcoin as payment when offered to him by whoever acquires a good or service”.³⁹

El Salvador prepared 20 bills in early February 2022 to provide a framework for the upcoming first-in-the-world Bitcoin bond, which will comply with domestic financial regulations. The Bitcoin bond will carry a 6.5% coupon with a maturity of 10 years and was originally scheduled to be issued between 15 March and 20 March 2022. El Salvador postponed the launch awaiting “favourable conditions in the financial market”.⁴⁰ The funds raised would be spent on Bitcoin purchases and the education and transportation establishment of the Bitcoin City near the Conchagua volcano that can generate geothermal energy for crypto mining.^{41/42} The Bitcoin bond is aptly called the “Volcano bond”. The Bitcoin City will only levy a 10% value-added tax (VAT) for its development and services, according to Salvadoran President Nayib Bukele.⁴³

It appears that El Salvador’s adoption of Bitcoin as its legal tender seems to have brought financial success to the country’s gross domestic product (GDP) and crypto tourism.

37 Griffiths, James. (7 February 2022). *At the Olympics, China’s digital yuan is off to a less-than-golden start*. The Globe and Mail. <https://www.theglobeandmail.com/business/article-at-the-olympics-chinas-digital-yuan-is-off-to-a-less-than-golden-start/>.

38 Griffiths, James. (7 February 2022). *At the Olympics, China’s digital yuan is off to a less-than-golden start*. The Globe and Mail. <https://www.theglobeandmail.com/business/article-at-the-olympics-chinas-digital-yuan-is-off-to-a-less-than-golden-start/>.

39 Roy, Avik. (9 June 2021). *El Salvador’s Bitcoin Law: Full English Text*. The Foundation for Research on Equal Opportunity. <https://freopp.org/el-salvadors-bitcoin-law-full-proposed-english-text-9a2153ad1d19>.

40 Renteria, Nelson. (23 March 2022). *El Salvador postpones bitcoin bond issue, expects better conditions*. Reuters. <https://www.reuters.com/technology/el-salvador-postpones-bitcoin-bond-issue-expects-better-conditions-2022-03-22/>.

41 Majcher, Kristin. (9 February 2022). *El Salvador plans to issue first bitcoin bond next month*. The Block. <https://www.theblockcrypto.com/post/133720/el-salvador-plans-to-issue-first-bitcoin-bond-next-month>.

42 Newar, Brian. (5 January 2022). *El Salvador prepares 20 bills to provide legal framework for Bitcoin bonds*. Cointelegraph. <https://cointelegraph.com/news/el-salvador-prepares-20-bills-to-provide-legal-framework-for-bitcoin-bonds>.

43 McDonald, Michael D. (22 November 2021). *El Salvador Plans Tokenized Bitcoin Bonds and Tax-Free ‘Bitcoin City’*. BloombergQuint. <https://www.bloombergquint.com/business/el-salvador-plans-1b-in-tokenized-bitcoin-bonds-bukele-says>.

Bukele proudly announced on his Twitter on 20 February 2022 that El Salvador's GDP in 2021 had recorded a 10.3% increase, a first-time double-digit leap, while exports, being the main component of its domestic economic growth, had a 13% advancement.⁴⁴ El Salvador's case has also proven that crypto tourism could be the next big thing for them as its tourism grew by 30% since the implementation of the Bitcoin Law with 60% of the tourists coming from the US.⁴⁵

El Salvador's bold move of fully embracing Bitcoin did not originally stem from Salvadorans' love for cryptocurrencies. A poll done by the Central American University and carried out in August 2021 showed that before El Salvador's landmark elevation of Bitcoin's status on 7 September 2021, over 67% out of 1,281 interviewees felt lukewarm to the historic change, with a mere 32% of people showing their acceptance on some level. It was also reported that 7 out of 10 interviewees believed that the Bitcoin Law should be repealed.⁴⁶ The Salvadoran government had to offer a USD 30 incentive encouraging people to start using the government-backed Bitcoin wallet "Chivo".

Case study 3: Stealing from El Salvador's Bitcoin wallets

Just a month after El Salvador's government had introduced Bitcoin to its citizens, a new illegal activity emerged: the theft of the USD 30 that was gifted by the Government as an incentive to install its digital wallet. The experience was the same for many people: when they opened the Chivo app and entered their personal information, a screen popped up warning that their document number was already associated with a wallet.

Authorities received thousands of complaints from Salvadorans who had discovered that their national identification numbers were used to steal the bonuses. While the investigation is ongoing and authorities are still trying to uncover the identity of the illicit recipients of the USD 30, Chivo is taking steps to improve the system by hiring a US company to fix the bugs that plagued the original wallet.⁴⁷

Some view that El Salvador's devotion to Bitcoin reflects its plan to ultimately reclaim monetary independence. This follows the replacement of the Salvadoran colón with the US dollar as its only legal tender in 2001 to maintain monetary stability.⁴⁸

Behind the Salvadoran Bitcoin glory, international dissent could be around the corner, worsening its foreign relationships. Fitch Ratings, a leading US rating agency, has downgraded El Salvador's Long Term Foreign Currency Issuer Default

44 Partz, Helen. (22 February 2022). *Tourism in El Salvador up 30% since Bitcoin adoption, minister says*. Cointelegraph. <https://cointelegraph.com/news/tourism-in-el-salvador-up-30-since-bitcoin-adoption-minister-says>.

45 Partz, Helen. (22 February 2022). *Tourism in El Salvador up 30% since Bitcoin adoption, minister says*. Cointelegraph. <https://cointelegraph.com/news/tourism-in-el-salvador-up-30-since-bitcoin-adoption-minister-says>.

46 Renteria, Nelson and Garrison, Cassandra. (3 September 2021). *Majority of Salvadorans do not want bitcoin, poll shows*. Reuters. <https://www.reuters.com/technology/majority-salvadorans-do-not-want-bitcoin-poll-shows-2021-09-02/>.

47 McDonald, Michael. (7 February 2022). *El Salvador Hires AlphaPoint to Fix Bitcoin Digital Wallet Bugs*. Bloomberg Quint. <https://www.bloomberquint.com/onweb/el-salvador-hires-alphapoint-to-fix-bitcoin-digital-wallet-bugs>.

48 Frankel, Jeffrey. (24 September 2021). *El Salvador's adoption of bitcoin as legal tender is pure folly*. The Guardian. <https://www.theguardian.com/business/2021/sep/24/el-salvador-adoption-of-bitcoin-as-legal-tender-is-pure-folly>.

Rating (IDR) from “B-” to “CCC”, which essentially represents “substantial credit risk” with a “very low margin for safety,” and that “default is a real possibility.”

“CCC” is tantamount to junk status.⁴⁹ The International Monetary Fund (IMF) has also been repeatedly asking El Salvador to dissolve its USD 150 million Bitcoin fund, with the residue to be returned to the treasury. It has also requested El Salvador to withdraw Bitcoin’s legal tender status because of the frequent fluctuations of Bitcoin values and the risk of crypto crimes.⁵⁰ In response to the IMF’s urge, El Salvador stressed that all financial and anti-money laundering and counter-terrorist financing (AML/CTF) regulations had been complied with and the Bitcoin fund was meant for automatic conversion between Bitcoin and the US dollars to address the high volatility of the former.

It would be interesting to see whether, in the long term, El Salvador will be moved to retract, or celebrate their gradual release from their dependence on the US dollar. It would also be intriguing to see whether other countries would follow suit. The Central African Republic (the CAR) is eager to seize the first-mover advantage by becoming the first nation in Africa and the second country in the world to adopt Bitcoin as its legal tender alongside Central African CFA franc in late April 2022. In doing so, the CAR aspires to overcome the stigma that sub-Saharan African countries often struggle to catch up with new technologies. What is remarkable about the CAR’s institutionalization of Bitcoin is that the CAR, previously troubled by years of civil conflicts, ranks 188 out of 189 countries in the United Nations Human Development Index 2020 with only 11% of its 4.83 million population having internet access. The CAR relies heavily on mineral extraction as its major economic activity.^{51/52} Whether the CAR is able to boost its economy and development by institutionalizing Bitcoin shall have a profound impact on how the rest of the world views the development of cryptocurrencies.

1.3 Different degrees of government engagement

Jurisdictions do not necessarily have to choose between one extreme and another. Most jurisdictions covered in this Working Paper adopt a middle-ground position on the questions of how to co-exist with cryptocurrencies, whether to allow a free market and whether to legislate. Each of these countries will decide depending on their political structure, the strength or vulnerability of their own currencies and their financial relationship with government or government-backed industries.

It does appear that not every jurisdiction has figured out how to solve the crypto Rubik’s cube yet and would rather adopt a “wait-and-see” approach for the time being. The following countries are examples of this.

49 Helms, Kevin. (10 February 2022). *Fitch Ratings Downgrades El Salvador Deeper Into Junk Status Citing Bitcoin Risks*. Bitcoin.com. <https://news.bitcoin.com/fitch-ratings-downgrades-el-salvador-deeper-into-junk-status-bitcoin-risks/>.

50 The Associated Press. (1 February 2022). *El Salvador angrily rejects IMF call to drop Bitcoin use*. ABC News. <https://abcnews.go.com/International/wireStory/el-salvador-angrily-rejects-imf-call-drop-bitcoin-82588223>.

51 Knight, Oliver. (29 April 2022). *Central African Republic Adopts Bitcoin as Legal Tender*. CoinDesk. <https://www.coindesk.com/business/2022/04/27/central-african-republic-adopts-bitcoin-as-legal-tender/>.

52 News Wires. (27 April 2022). *Central African Republic adopts bitcoin as legal currency*. France 24. <https://www.france24.com/en/africa/20220427-central-african-republic-adopts-bitcoin-as-legal-currency>.

1.3.1 India and Vietnam are watching

India

India has made it clear that it would take time to make informed decisions without rushing through any crypto development policies.⁵³ The Indian Supreme Court reversed the Reserve Bank of India (RBI)'s 2018 circular forbidding financial institutions and banks from facilitating crypto transactions in March 2020, effectively opening up again the crypto space. The Indian government planned to introduce the Cryptocurrency and Regulation of Official Digital Currency Bill, 2021 in Parliament's Winter Session seeking to ban all "private cryptocurrencies", leaving certain breathing room to promote the underlying technologies.⁵⁴ Violation of the proposed regulation would be a "cognizable" offence, putting it at the same level as murders, kidnapping and dowry deaths, allowing the RBI and the Securities and Exchange Board of India to arrest the suspected without a warrant or a bail.^{55/56}

Although it is unclear as to what amounts to a "private" cryptocurrency, such ambiguity may not be an immediate concern as the Bill was left out of the Winter Session which ended on 22 December 2021.⁵⁷ Later in the subsequent parliament session, also known as the 2022-23 Union Budget, the Minister of Finance and Corporate Affairs of India, Nirmala Sitharaman expressed that more effort would be required before the government could decide on whether to legalise or ban cryptocurrencies, but authorities would still allow crypto trading at the moment.^{58/59} Meanwhile, the Indian Financial Secretary, T.V. Somanathan expressly excluded in early February 2022 the possibility of cryptocurrencies becoming a legal tender in India and confirmed that only the "digital rupee" which would be introduced by the RBI in late 2022 or 2023 would bear such legal status.^{60/61}

Having said that, the Advertising Standards Council of India published the Guidelines for the advertising of Virtual Digital Assets and Linked Services on 23 February 2022, regulating the promotion of VA-related (including cryptocurrencies and NFTs) advertisements published on or after 1 April 2022. Earlier public advertisements must also comply with the Guidelines after 15 April 2022.

53 Singh, Amitoj. (2 May 2022). *India Includes Crypto Businesses in New Rules for Cyber Security*. CoinDesk. <https://www.coindesk.com/policy/2022/05/02/india-includes-crypto-businesses-in-new-rules-for-cyber-security/>.

54 Qureshi, Mehab. (30 November 2021). *From ban to regulation, cryptocurrency's journey so far in India*. The Indian Express. <https://indianexpress.com/article/technology/crypto/cryptocurrency-in-india-a-look-at-the-regulatory-journey-of-cryptocurrencies-7648767/>.

55 Ghosh, Monika. (10 December 2021). *India's crypto bill to impose jail and US\$2.65M fines for violations*. Forkast. <https://forkast.news/india-crypto-bill-rules-jail-time-violations/>.

56 Singh, Amitoj. (23 December 2021). *India's Crypto Law Might Not Be Ready Before May, Sources Say*. CoinDesk. <https://www.coindesk.com/policy/2021/12/23/indias-crypto-law-might-not-be-ready-before-may-sources-say/>.

57 Singh, Amitoj. (23 December 2021). *India's Crypto Law Might Not Be Ready Before May, Sources Say*. CoinDesk. <https://www.coindesk.com/policy/2021/12/23/indias-crypto-law-might-not-be-ready-before-may-sources-say/>.

58 Bryanov, Kirill. (11 February 2022). *India's finance minister waiting for consultations to decide whether to ban or regulate crypto*. Cointelegraph. <https://cointelegraph.com/news/india-s-finance-minister-waiting-for-consultations-to-decide-whether-to-ban-or-regulate-crypto>.

59 Madhok, Diksha. (8 February 2022). *India wants to launch a digital rupee and tax crypto profits*. CNN Business. <https://edition.cnn.com/2022/02/01/investing/india-budget-digital-rupee/index.html>.

60 Press Trust of India. (3 February 2022). *India will not make any crypto asset a legal tender: Finance Secretary*. Thew News Minute. <https://www.thenewsminute.com/article/india-will-not-make-any-crypto-asset-legal-tender-finance-secretary-160571>.

61 Bryanov, Kirill. (11 February 2022). *India's finance minister waiting for consultations to decide whether to ban or regulate crypto*. Cointelegraph. <https://cointelegraph.com/news/india-s-finance-minister-waiting-for-consultations-to-decide-whether-to-ban-or-regulate-crypto>.

All advertisements must embed a conspicuous disclaimer warning that “crypto products and NFTs are unregulated and can be highly risky. There may be no regulatory recourse for any loss from such transactions.” Certain words such as “being a solution to money or other problems”, “guaranteeing a future increase in profits”, “currency”, “securities”, “custodian” and “depositories” shall not be featured in the VA advertisements. Celebrities must also exercise their due diligence not to mislead consumers before endorsing any VA products.⁶²

India is dedicated to fighting against suspicious and illicit activities in the cyber sector which includes the crypto industry. The Indian Computer Emergency Response Team has been designated on 28 April 2022 as the national agency to maintain cybersecurity. VASPs, virtual asset exchange providers and custodian wallet providers must maintain KYC information and financial transaction records for five years.⁶³ The Indian government seems to also be firm about its “sovereign right to tax” 30% gains generated from VA transactions like winnings from gambling activities starting from 1 April 2022.^{64,65} Discussion of tax treatment will be further addressed below.

Vietnam

It appears that Vietnam is taking an even steadier approach. Decree No.80/2016/ND-CP issued by the State Bank of Vietnam (SBV) on non-cash payments specifies that cryptocurrencies are not legal means of payment in Vietnam and the issuance, provision and usage of cryptocurrencies should be disallowed.⁶⁶ The SBV has made it clear that cryptocurrencies are not legal tender.⁶⁷ As per a directive issued on 11 April 2018, cryptocurrencies can no longer be used for as a means of payment for goods or services. Violators could face a maximum fine of VND 200 million (around USD 8,700). However, it seems that buying, holding and trading cryptocurrencies are not restrained and tolerated at the moment.^{68,69}

The crypto regulatory framework in Vietnam remains largely underdeveloped as there is no legal definition of cryptocurrency or VA yet.⁷⁰ The only regulations touching upon cryptocurrencies are dispersed and sometimes implied under different instruments, such as the Prime Minister’s directives, SBV’s official letters and dispatches, and regulations on non-cash payments. In other words, while official warnings have been issued to bring crypto investment risks to people’s attention,

62 Helms, Kevin. (25 February 2021). *India Unveils Guidelines for Crypto Advertising*. Bitcoin.com. <https://news.bitcoin.com/india-unveils-guidelines-for-crypto-advertising/>.

63 Singh, Amitoj. (2 May 2022). *India Includes Crypto Businesses in New Rules for Cyber Security*. CoinDesk. <https://www.coindesk.com/policy/2022/05/02/india-includes-crypto-businesses-in-new-rules-for-cyber-security/>.

64 Bryanov, Kirill. (11 February 2022). *India’s finance minister waiting for consultations to decide whether to ban or regulate crypto*. Cointelegraph. <https://cointelegraph.com/news/india-s-finance-minister-waiting-for-consultations-to-decide-whether-to-ban-or-regulate-crypto>.

65 Press Trust of India. (3 February 2022). *India will not make any crypto asset a legal tender: Finance Secretary*. Thew News Minute. <https://www.thenewsminute.com/article/india-will-not-make-any-crypto-asset-legal-tender-finance-secretary-160571>.

66 Nguyen, Daisy. (23 September 2020). *Cryptocurrency is not a legal payment method in Vietnam: C.bank*. Vietnam Insider. <https://vietnaminsider.vn/cryptocurrency-is-not-a-legal-payment-method-in-vietnam-c-bank/>.

67 Ak, Qadir. (8 June 2020). *Cryptocurrency Regulations in Vietnam*. CoinPedia. <https://coinpedia.org/cryptocurrency-regulation/cryptocurrency-regulations-in-vietnam/>.

68 Ak, Qadir. (8 June 2020). *Cryptocurrency Regulations in Vietnam*. CoinPedia. <https://coinpedia.org/cryptocurrency-regulation/cryptocurrency-regulations-in-vietnam/>.

69 Prodent, Lisa. (8 July 2021). *Vietnam Establishes Research Group to Study Regulations on Cryptocurrencies*. Vietnam Briefing. <https://www.vietnam-briefing.com/news/vietnam-establishes-research-group-study-regulations-cryptocurrencies-2.html/>.

70 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 78.

no Vietnamese law is available to govern crypto investments or other related areas except for the express prohibition of using cryptocurrencies as a means of payment.⁷¹

Under the new investment law adopted in 2020, two lists have been set out indicating sectors that allow conditional investments or forbid investments. While cryptocurrencies are not explicitly on either of the lists, it remains to be seen whether they are actually inferred. According to a Vietnamese law firm Indochine Counsel, crypto exchanges are not yet permitted as of 2 November 2021 as they deal with cryptocurrencies which are not legally recognised as a type of property under Article 105 of the Civil Code 2015, which states that property comprises “objects, money, valuable papers and property rights” and “immovable property and movable property. Immovable property and movable property may be existing property and property to be formed in the future”.^{72/73}

Supported by the Vietnam Finance Ministry, a research group of nine members, comprising the General Department of Taxation, the National Institute of Finance, the General Department of Vietnam Customs and the Department of Banking and Financial Institutions of the SBV, were tasked on 11 May 2020 to study and develop VA regulations and policies.⁷⁴ In June 2021, the Vietnamese Prime Minister Pham Minh Chinh introduced a 5-year digital government development strategy running from 2021 to 2025 with orientations towards 2030 via Decision No.942/QĐ-TTg, which, amongst other things, encourages “researching on, developing and piloting the use of virtual currency based on blockchain technology”.⁷⁵ Since the 5-year strategy has just kicked off for less than a year and discussions are likely still to be in their preliminary stage, there seems to be no substantive published official report on VAs for the time being. Having said that, the Vietnamese Deputy Prime Minister has tasked the Ministry of Finance on 23 March 2022 to prepare a legal framework on VAs and cryptocurrencies and produce a specific time frame for implementation.⁷⁶

Despite the current lack of crypto-centric regulations, the Vietnamese government does not tolerate money laundering and terrorist financing (ML/TF) as the SBV has been partnering with the Ministry of Public Security and instructing intermediary payment service providers to report suspicious transactions in a timely manner and not to run crypto transactions. Other ministries are also working on monitoring crypto transactions including those that take place via automatic teller machines (ATMs) and bank card payment locations.⁷⁷

71 Indochine Counsel. (2 November 2021). *Comparative guide on cryptocurrency legislations and guidelines in Vietnam*. Vietnam Investment Review. <https://vir.com.vn/comparative-guide-on-cryptocurrency-legislations-and-guidelines-in-vietnam-88833.html>.

72 Indochine Counsel. (2 November 2021). *Comparative guide on cryptocurrency legislations and guidelines in Vietnam*. Vietnam Investment Review. <https://vir.com.vn/comparative-guide-on-cryptocurrency-legislations-and-guidelines-in-vietnam-88833.html>.

73 The National Assembly of Vietnam. (24 November 2015). *Civil Code (No. 91-2005-QH13)*, at Article 105 https://www.economica.vn/Content/files/LAW%20%26%20REG/91_2015_QH13%20Civil%20Code.pdf.

74 Ak, Qadir. (8 June 2020). *Cryptocurrency Regulations in Vietnam*. CoinPedia. <https://coinpedia.org/cryptocurrency-regulation/cryptocurrency-regulations-in-vietnam/>.

75 The Prime Minister of the Socialist Republic of Vietnam. (15 June 2021). *Decision approving strategy for development of e-Government towards digital Government for 2021 - 2025 with orientations towards 2030 (No. 942/QĐ-TTg)*. <https://vanbanphapluat.co/decision-942-qd-ttg-2021-development-of-e-government-with-orientations-towards-2030>.

76 VietNamNet Global. (28 March 2022). *Vietnam prepares legal framework for virtual assets, virtual currency*. <https://vietnamnet.vn/en/vietnam-prepares-legal-framework-for-virtual-assets-virtual-currency-826055.html>.

77 Indochine Counsel. (2 November 2021). *Comparative guide on cryptocurrency legislations and guidelines in Vietnam*. Vietnam Investment Review. <https://vir.com.vn/comparative-guide-on-cryptocurrency-legislations-and-guidelines-in-vietnam-88833.html>.

1.3.2 Singapore – a textbook example?

Singapore is renowned as a crypto-friendly international hub. Statistics have shown that the financial technology (FinTech) (including crypto) industry in Singapore is thriving, recording USD 346 million-worth FinTech investment in 2020 and dominating 6.2% of investments in Asia. DBS, the largest bank in Singapore, reported in September 2021 that it estimated that its newly launched crypto trading platform would reach 1,000 users by the end of December of the same year and the user base would grow by 20%-30% annually in the next few years.⁷⁸ What are the secret ingredients of Singapore's crypto regulatory success?

Singapore's crypto strategy has been consistent and rather straightforward: legally acknowledging the existence of VAs while regulating it appropriately. With the Monetary Authority of Singapore (MAS) as the watchdog, Singapore's regulatory framework for VAs is comprehensive and wholesome, encompassing different fields such as ICOs, AML/CTF and trading VAs.⁷⁹ Cryptocurrencies are legally recognised as property (but not legal tender) in Singapore and classified as "digital payment tokens" (DPTs) by the Inland Revenue Authority of Singapore (IRAS). The IRAS does not levy crypto capital gains tax and has exempted DPTs from goods and services tax effective 1 January 2020. However, profits could be taxable if the VA transactions are carried out consistently in the course of business.^{80/81}

Singapore was one of the first few jurisdictions to introduce crypto-specific regulations, including the amendments to the Payment Services Act (PSA) which was passed in January 2019 and came into force on 28 January 2020.⁸² Since the PSA had been amended before the Financial Action Task Force on Money Laundering (FATF) released its Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers in June 2019, it did not include the NATF definition of custodian wallet providers.⁸³

The further 2021 amendments to the PSA granted MAS the power to regulate DPT services and provides and expanded the definition of "DPT services" to include DPT transfers, custodian wallet services and the exchange of DPTs by DPT service providers.⁸⁴ Other regulations are also at work to govern different aspects of crypto. For example, the Securities and Futures Act (SFA) requires issuers of DPTs which are by nature capital market products to hold a Capital Market Service License (or other required licenses or statuses), produce a prospectus and register their crypto projects with the MAS.

78 Fintechnews Singapore. (18 January 2021). *Singapore Fintech Report 2021: Blockchain Dominates Singapore's Fintech Scene*. <https://fintechnews.sg/47131/studies/singapore-fintech-report-2021-blockchain-dominates-singapores-fintech-scene/>.

79 Tan, Malcom. (19 October 2021). *How Singapore's crypto regulations are shaping its DeFi space*. Forkast. <https://forkast.news/singapore-crypto-regulations-shaping-defi/>.

80 Tan, Malcom. (19 October 2021). *How Singapore's crypto regulations are shaping its DeFi space*. Forkast. <https://forkast.news/singapore-crypto-regulations-shaping-defi/>.

81 Ozelli, Selva. (12 February 2022). *Why Singapore is one of the most crypto-friendly countries*. Cointelegraph. <https://cointelegraph.com/news/why-singapore-is-one-of-the-most-crypto-friendly-countries>.

82 Joseph Tan Jude Benny LLP. (13 May 2021). *Crypto regulation in Singapore and Thailand*. Asia Business Law Journal. <https://law.asia/crypto-regulation-singapore-thailand/>.

83 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 77-78.

84 Sumsb. (1 February 2022). *Singapore's Digital Payment Token Regulations: Everything You Need to Know*. <https://sumsub.com/blog/new-law-in-singapore/>.

Like India, as regards crypto promotion, the MAS has published the Guidelines on Provision of Digital Payment Token Services to the Public (PS-G02) on 17 January 2022, requesting DPT service providers to ensure that their crypto marketing campaigns comply with the risk disclosure requirements. For example, the risk of trading DPTs must be shown in the form of a risk warning statement and not be downplayed. Crypto advertisements should not be displayed in public areas or target the public. Engaging third parties for promotion is also discouraged. Compliant advertisements can be posted on the DPT service providers' social media accounts, corporate websites and mobile applications.⁸⁵ This latest restriction on crypto promotion has led to the instant shutdown of some public crypto ATMs while the rest are scrambling to observe the new Guidelines.^{86/87}

Singapore also imposes rigorous AML/CTF requirements on the crypto industry. Along with risk assessment, risk mitigation and record-keeping, DPT service providers must also verify new customers' identities before initiating any services, continue to look out for their status changes, and perform enhanced checks on, for example, politically exposed persons.⁸⁸ They are also required to consistently monitor transactions, report any attempted or actual suspicious movements to the Singapore Police Force and the MAS while developing internal protocols to address AML/CTF risks.

Singapore also passed the Financial Services and Markets Bill 2022 on 5 April 2022 which is aimed at governing the financial and crypto sector in Singapore. To better comply with the enhanced FATF standards introduced in 2019, the Bill would have an extraterritorial effect on Singapore-incorporated VASPs that provide services from abroad.⁸⁹

DPT service providers must carry out KYC protocols to verify users' identities and obtain a digital payment token license from MAS (MAS DPT License) to legally operate in Singapore (MAS Licensing Regime). The MAS Licensing Regime happens to be quite stringent. Out of the approximately 400 licensing applications, only five well-financed entities have been awarded a MAS DPT License as of January 2022, namely DBS Vickers (the brokerage arm of DBS Bank), Fomo Pay (a Singapore-based FinTech company), Triple A (a Singapore-based crypto payments provider), Coinhako (a Singapore-based crypto trading platform and digital asset wallet services provider), and Independent Reserve Cryptocurrency Exchange (an Australia-based crypto exchange).⁹⁰

85 Magnus, Stephanie, Tan, Eunice and Liew, Ying Yi. (26 February 2022). *Singapore: New MAS guidance restricts public marketing of cryptocurrencies*. Lexology. <https://www.lexology.com/library/detail.aspx?g=2178645c-4108-495b-b990-c27852ef67b1>.

86 CoinCulture. (15 February 2022). *New Regulations Force Bitcoin ATMs To Close In Singapore*. <https://coinculture.com/au/policy-regulation/bitcoin-atms-forced-shutdown-singapore/>.

87 On a separate note, Thailand has also commenced on 14 February 2022 a 1-month public hearing period on proposed VA promotion guidelines applicable to all VA firms in Thailand and in line with crypto regulations of other jurisdictions such as Singapore, Japan and the United Kingdom. See Thienpreecha, Kobkit. (16 February 2022) *Thailand's SEC Opens Public Hearing Period On Digital Asset Advertising Rules*. Conventus Law. <https://conventuslaw.com/report/thailands-sec-opens-public-hearing-period-on/>.

88 Sumsb. (1 February 2022). *Singapore's Digital Payment Token Regulations: Everything You Need to Know*. <https://sumsub.com/blog/new-law-in-singapore/>.

89 Clifford Chance. (18 April 2022). *New Omnibus Act for Singapore's Financial Sector – Financial Services and Markets Act 2022*. <https://www.cliffordchance.com/briefings/2022/04/new-omnibus-act-for-singapore-financial-sector.html>.

90 CoinCu. (8 February 2022). *Singapore isn't exactly the promised land for virtual currency business*. <https://news.coincu.com/62418-singapore-isnt-exactly-the-promised-land-for-virtual-currency-business/>.

Although MAS has not yet disclosed a checklist of objective criteria when considering applications, it appears that those institutions that are given an MAS DPT Crypto Licence have abundant resources to comply with the relevant laws and curb ML/TF risks.

Some may have treated (or mistaken) the fact that the MAS is granting temporary exemption to certain entities allowing them to operate without an MAS DPT Licence within a specified period as a sign of regulatory acceptance or tolerance. However, the MAS has removed the immunity of around 100 digital payment firms.⁹¹ Even the Singapore branch of the world's largest crypto exchange Binance was ordered by the MAS to terminate its operation in Singapore by 13 February 2022.⁹² Coupled with the rising compliance costs, around 30 applicants have also withdrawn their applications for a MAS DPT Licence and are potentially looking for other crypto-friendlier jurisdictions.⁹³

Some say this is the typical example of quality over quantity as the Singapore crypto market does not need hundreds of crypto providers anyway. In contrast, some view that granting MAS DPT Licences to only a few elites would create a government-approved monopoly with a preference of serving institutional investors and high-net-worth individuals and hinder the growth of crypto startups in the long run.⁹⁴

In sum, the secret ingredients that bring the best out of Singapore's crypto policy are:

- a pro-crypto stable environment
- low tax rates
- consistent policies and regulations on par with international standards.

Through Singapore's example, one can see the importance of balanced regulation between welcoming and encouraging FinTech innovation and controlling systemic risks potentially brought about by VA. Welcoming the development of VAs and the technologies involved does not equate with recklessly accepting all their shortcomings or even turning a blind eye to the most evident risks (such as misleading or false marketing and ML/TF risks). After all, it is understandable for a reasonable stakeholder to ask that their own interests be protected by law and that the underlying technology be formally promoted.

1.3.3 Central bank digital currencies (CBDCs)

There is probably some truth in the saying "if you can't beat them, join them". A January 2021 report produced by the Bank for International Settlements (BIS) shows that, be it retail or wholesale CBDCs, 86% of the central bank respondents were conducting research, 60% were running trials, and 14% were piloting their CBDCs.⁹⁵

91 Lian, Anndy. (24 January 2022). *Where does Singapore's crypto policy go from here?* Forkast. <https://forkast.news/where-does-singapores-crypto-policy-go-from-here/>.

92 CoinCu. (8 February 2022). *Singapore isn't exactly the promised land for virtual currency business.* <https://news.coincu.com/62418-singapore-isnt-exactly-the-promised-land-for-virtual-currency-business/>.

93 Lian, Anndy. (24 January 2022). *Where does Singapore's crypto policy go from here?* Forkast. <https://forkast.news/where-does-singapores-crypto-policy-go-from-here/>.

94 Tan, Malcom. (19 October 2021). *How Singapore's crypto regulations are shaping its DeFi space.* Forkast. <https://forkast.news/singapore-crypto-regulations-shaping-defi/>.

95 Boar, Codruta Boar and Wehrli, Andreas. (January 2021). *BIS Papers No 114: Ready, steady, go? – Results of the third BIS survey on central bank digital currency.* Bank for International Settlements. <https://www.bis.org/publ/bppdf/bispap114.pdf>.

CBDCs are not cryptocurrencies as they are centralised and issued by the central banks. They are generally seen as a safer and more legitimate alternative to cryptocurrencies and can be DLT or non-DLT backed. The Group of Seven (G7)'s Public Policy Principles for Retail Central Bank Digital Currencies (G7 PPP) published on 14 October 2021 agreed that CBDCs would co-exist alongside cash based on the principles of a digital economy, innovation and financial inclusion.^{96/97}

Pro-CBDC jurisdictions

One of the recent CBDC use examples is China, testing its DLT-semi-powered e-CNY during the 2022 Beijing Winter Olympics as mentioned hereinabove.

Case study 4: Bhutan's new Central Bank Digital Currency

Among the countries experimenting with CBDCs is the Kingdom of Bhutan. Its Royal Monetary Authority (RMA) announced in September 2021 that was collaborating with the US-based company Ripple Labs to create a national digital currency, the "digital Ngultrum".⁹⁸

One of the goals is that "easier, faster and more affordable payments, both domestically and internationally" will help to reach a financial inclusion of 85% of the population by 2023. Right now, thousands of Bhutanese citizens do not have access to a savings account or credit cards.

According to its 2021 Annual Report,⁹⁹ the RMA acknowledged that, even in Bhutan, citizens are abandoning cash for contactless payments systems and the use of physical money will continue to decline as technology advances. While people are more prone to adapt and use cryptocurrencies, they exist in unregulated space and cannot be controlled by RMA, thereby posing a serious challenge. A digital Ngultrum would provide the population with a digital solution that can still be monitored and governed by the monetary authorities.

Another unspoken objective may be to make the high volumes of remittances that the country receives easier and cheaper. Remittances amounted to more than USD 100 million in 2020. This represents almost 5% of the country's GDP of USD 2.5 billion.¹⁰⁰

Below is a list of some jurisdictions that are planning or running a CBDC:

- **Bhutan:** The Royal Monetary Authority of Bhutan has been partnering with US-based blockchain and crypto solutions firm Ripple Labs, Inc. since

96 G7 is an informal multilateral forum consisting of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

97 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 66-67.

98 Royal Monetary Authority of Bhutan. (September 2021). *Press release*. https://www.rma.org.bt/what_news.jsp?newId=334.

99 Royal Monetary Authority of Bhutan. (2021). *2021 annual report*. [http://www.rma.org.bt/RMA Publication/Annual Report/Annual Report 2020-2021.pdf](http://www.rma.org.bt/RMA%20Publication/Annual%20Report/Annual%20Report%202020-2021.pdf).

100 Zangpo, Thukten. (6 November 2021). Remittance in 2020 contributed 4.82% to the GDP. Kuensel. <https://kuenselonline.com/remittance-in-2020-contributed-4-82-to-the-gdp/>. Thukten Zangpo. (6 November 2021). Remittance in 2020 contributed 4.82% to the GDP

September 2021 to pilot a digital ngultrum.¹⁰¹

- **India:** The RBI announced on 8 April 2022 that it is in a position to begin testing and implementing CBDC pilot projects.¹⁰²
- **Indonesia:** The Bank of Indonesia was mulling a digital rupiah in May 2021 with no specific timeline yet.¹⁰³
- **Russia:** The Bank of Russia mentioned in February 2022 the possibility of a peer-to-peer digital ruble given the trial success of the non-blockchain backed digital ruble transactions on the mobile applications of three local banks. The Bank of Russia further said on 21 April 2022 that it planned to launch a pilot for the digital ruble in 2023 that could be utilised for international payments. The digital ruble is classified as a “digital financial asset”.^{104/105}
- **Thailand:** The Bank of Thailand (BOT) plans to test its CBDC in Q2 2022. Meanwhile, the Tourism Authority of Thailand seeks to obtain the Thai government’s approval for launching the TAT Coin, which is a utility token missioned to promote crypto tourism.¹⁰⁶

Myanmar – CBDC proposal rejected by IMF

The Central Bank of Myanmar laid down a directive banning all digital currencies in May 2020.¹⁰⁷ Soe Thein, the permanent secretary of the Military’s Transport and Communications Ministry, proposed a draft bill in January 2022 that would impose a 6-month to 1-year imprisonment and a maximum fine of MMK 5 million (around USD 2,800) on digital currency users, after the original draft in February 2021 being pushed back due to social outcry. Offenders could face.¹⁰⁸

Despite the hostile attitude towards crypto, the military junta expressed in February 2021 that it would like to take a shot at launching a CBDC to boost its economy which has been crippled by the pandemic and political unrest. However, the World Bank was quick to criticise the stratocracy’s CBDC dream and commented that “the country is not in the best position to be able to pursue something like this. It would need a very good regulatory structure and high capacity within the administration to make it happen.”¹⁰⁹

101 Blockchain Asset Review. (11 February 2022). *Singapore firm Blockchain Monk signs pact with the Government of Bhutan to roll out blockchain technologies in the Himalayan Kingdom*. <https://blockchainassetreview.com/singapore-firm-blockchain-monk-signs-pact-with-the-government-of-bhutan-to-roll-out-blockchain-technologies-in-the-himalayan-kingdom/>.

102 Outlook. (8 April 2022). *India To Start CBDC Pilot, Testing Soon: RBI Deputy Governor*. <https://www.outlookindia.com/business/india-to-start-cbdc-pilot-testing-soon-rbi-deputy-governor-news-190716>.

103 Reuters. (25 May 2021). *Bank Indonesia joins global c.bank push for digital currencies*. <https://www.reuters.com/article/indonesia-cenbank-cryptocurrency/bank-indonesia-joins-global-c-bank-push-for-digital-currencies-idUSL2N2NCONX?rpc=401&>.

104 Schwartz, Molly. (21 February 2022). *Russia’s Finance Ministry Submits Draft Cryptocurrency Regulations*. The Moscow Times. <https://www.themoscowtimes.com/2022/02/21/crypto-a76437>.

105 Jones, Marc. (22 April 2022). *Russia makes ‘digital’ rouble, home-grown credit card push*. Reuters. <https://www.reuters.com/business/finance/russia-makes-digital-rouble-home-grown-credit-card-push-2022-04-21/>.

106 Sakshi, K S. (24 February 2022). *Bank of Thailand to test and implement CBDC in Q2 2022; increased momentum in the crypto market prevails*. The Global Economics. <https://www.theglobaleconomics.com/2022/02/24/bank-of-thailand/>.

107 Jha, Prashant. (13 December 2021). *Myanmar shadow government declares stablecoin USDT an official currency*. Cointelegraph. <https://cointelegraph.com/news/myanmar-shadow-government-declares-stablecoin-usdt-an-official-currency>.

108 Dobberstein, Laura. (24 January 2022). *Myanmar’s military junta seeks ban on VPNs and digital currency*. The Register. https://www.theregister.com/2022/01/24/myanmar_military_junta_bans_vpns_crypto/.

109 Kaaru, Steve. (11 February 2022). *Myanmar: Military gov’t mulls digital currency but World Bank shoots it down*. CoinGeek. <https://coingeek.com/myanmar-military-govt-mulls-digital-currency-but-world-bank-shoots-it-down/>.

In parallel, the National Unity Government, Myanmar’s government in exile that is recognised by the European Parliament and the French Senate as the legitimate government, announced that it would adopt Tether as an official currency to facilitate “trade, services, and payment systems”, finance political campaigns, and bypass the stratocracy’s surveillance.¹¹⁰

The Philippines – no longer against the CBDC current

The Philippines once seemed to be spontaneously against the current on developing CBDCs. It was reported in early February 2022 that, Benjamin Diokno, the Bangko Sentral ng Pilipinas (BSP) governor and ex officio chairman of the Anti-Money Laundering Council, indicated that currently “the BSP has no plans to introduce a CBDC in the near term primarily because the population remains heavily cash reliant given the country’s efficient and effective payment and settlement systems.”¹¹¹ Indeed, central banks would need to consider whether the introduction of CBDCs would weaken the functions of commercial banks due to uncalculated over-conversion of bank deposits to CBDCs.¹¹²

However, as a turn of events, Diokno announced on 1 March 2022 the BSP’s plan for a pilot CBDC implementation “Project CBDCPh”, with the aim to “build organizational capacity and hands-on knowledge of key aspects of CBDC that are relevant for a use case around addressing frictions in the national payment system”.¹¹³ The BSP announced on 27 April 2022 that it is presently working on a wholesale CBDC pilot project.¹¹⁴

Multiple Central Bank Digital Currency (m-CBDC)

A CBDC dedicated to cross-border payments could come into reality in the future. With the support of the Hong Kong-based Bank for International Settlements Innovation Hub Centre, the Central Bank of the United Arab Emirates and the Digital Currency Institute of the PBOC have joined the BOT and the Hong Kong Monetary Authority to work on the Multiple Central Bank Digital Currency under the “m-CBDC Bridge” project.

The DLT-backed m-CBDC is envisaged to “facilitate real-time cross-border foreign exchange payment-versus-payment transactions in a multi-jurisdictional context and on a 24/7 basis”. The joint effort will also look into cross-border business use cases and connections to other financial institutions. Discussions will also revolve around areas such as “token conversion, real-time interbank funds transfer, foreign exchange execution, liquidity management and regulatory compliance”.¹¹⁵

110 Jha, Prashant. (13 December 2021). *Myanmar shadow government declares stablecoin USDT an official currency*. Cointelegraph. <https://cointelegraph.com/news/myanmar-shadow-government-declares-stablecoin-usdt-an-official-currency>.

111 Noble, Luz Wendy T. (7 February 2022). *BSP unlikely to issue digital currency*. BusinessWorld. <https://www.bworldonline.com/bsp-unlikely-to-issue-digital-currency/>.

112 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 63.

113 Bangko Sentral ng Pilipinas. (1 March 2022). *Opening Remarks of Governor Benjamin E. Diokno for the Joint BSP-AFI Knowledge Exchange Program on Central Bank Digital Currency*. <https://www.bsp.gov.ph/SitePages/MediaAndResearch/SpeechesDisp.aspx?ItemID=915>.

114 Bangko Sentral ng Pilipinas. (27 April 2022). *Project CBDCPh to Further Strengthen PH Payment System*. <https://www.bsp.gov.ph/SitePages/MediaAndResearch/MediaDisp.aspx?ItemID=6252>.

115 Hong Kong Monetary Authority, Bank of Thailand, Central Bank of the United Arab Emirates and Digital Currency Institute of the People’s Bank of China. (23 February 2021). *Joint statement on the Multiple Central Bank Digital Currency (m-CBDC) Bridge Project*. <https://www.hkma.gov.hk/eng/news-and-media/press-releases/2021/02/20210223-3/>.

1.3.4 Official VA exchanges

Governments have also been considering becoming the middlemen themselves in VA transactions, regardless of whether they view cryptocurrencies as a legal means of payment.

Despite Indonesia's ban on crypto payments, for example, trading in cryptocurrencies is legalised in Indonesia and the Ministry of Trade is leading the establishment of a national crypto exchange in early 2022.^{116/117}

In Thailand, the BOT noted the high volatility of value and MF/TF risks of cryptocurrencies in its discussion paper published on 1 February 2022.¹¹⁸ Regulated exchanges in Thailand can arrange crypto trades but not any transactions involving NFTs, meme coins, utility tokens and social tokens by early July 2021.¹¹⁹ Meanwhile, the Stock Exchange of Thailand plans to apply for a digital exchange licence from the Thai Securities and Exchange Commission and set up the Thai Digital Exchange in Q3 2022. The Thai Digital Exchange aims to provide trading, clearing and internal wallet services with a focus on asset-backed investment tokens and utility tokens but not on cryptocurrencies.¹²⁰

1.3.5 Other drivers to promote or ban cryptocurrencies

Below are other drivers that may prompt governments to promote or ban cryptocurrencies or VAs as a whole.

Financial inclusion and saving the pandemic-crippled economy

Cryptocurrencies could be used to boost or even rescue the pandemic-crippled economies. As previously mentioned, El Salvador and Singapore have, through the regulatory acceptance of cryptocurrencies, achieved great commercial success around FinTech, GDP and crypto tourism.

Countries are enjoying the financial benefits brought about by cryptocurrencies, but what about their citizens? The World Bank pointed out in August 2021 that almost 50% of the Latin American and Caribbean adult population did not own a bank account. This could be due to the physical and economic inaccessibility of and lack of social trust in the conventional financial institutions. Being unbanked means they are excluded from the traditional finance system.¹²¹

116 Wu, Cynthia. (6 February 2022). *All eyes on Asia: Crypto's new chapter post-China*. Cointelegraph. <https://cointelegraph.com/news/all-eyes-on-asia-crypto-s-new-chapter-post-china>.

117 VOI English. (23 January 2022). *The Government Will Soon Present A Crypto Exchange To Encourage A Better Ecosystem*. <https://voi.id/en/technology/127034/the-government-will-soon-present-a-crypto-exchange-to-encourage-a-better-ecosystem>.

118 Fintechnews Singapore. (11 February 2022). *Thailand's Financial Regulator Lays out Plans for Payments Using Digital Assets*. <https://fintechnews.sg/59074/thailand/thailands-financial-regulator-lays-out-plans-for-payments-using-digital-assets/>.

119 Shah, Saqib. (14 June 2021). *Thailand bans meme coins and NFTs as part of crypto crackdown*. Engadget. <https://www.engadget.com/thailand-bans-meme-coins-nft-113518980.html>.

120 Polkuamdee, Nuntawun. (24 December 2021). *SET to launch digital asset exchange*. Bangkok Post. <https://www.bangkokpost.com/business/2236971/set-to-launch-digital-asset-exchange>.

121 Cazador, Xochitl and Valle, Angélica. (13 April 2022). *El Salvador's Bitcoin Law: Understanding alternatives to government intervention*. Cointelegraph. <https://cointelegraph.com/news/el-salvador-s-bitcoin-law-understanding-alternatives-to-government-intervention>.

Financial inclusion would be a prerequisite to financial freedom. Cryptocurrencies could be an accessible and affordable tool to advance financial inclusion since arguably one can easily be connected to the crypto network with internet access. According to a 2017 Report on State of broadband in Latin America and the Caribbean prepared by the United Nations Economic Commission for Latin America and the Caribbean, the network had already reached 56% of the regional population, which was an applaudable growth of 36% in a decade.

Religions and beliefs

Governments' crypto policy could be steered by religions and beliefs. Indonesia's top Islamic clerical body, the Indonesian Ulema Council, ruled in November 2021 that cryptocurrencies did not comply with Sharia law because of their risks and unpredictability.¹²²

The World Bank has concluded that Islamic finance is "equity-based, asset-backed, ethical, sustainable, environmentally- and socially-responsible finance" and guided by the following four tenets:

- "Prohibition of interest on transactions (riba);
- Financing must be linked to real assets (materiality);
- Engagement in immoral or ethically problematic businesses is not allowed (e.g., arms manufacturing or alcohol production); and
- Returns must be linked to risks".¹²³

According to Islamic law specialist Denny Rahmansyah, the Indonesian legal system is composed of civil law, local customary law and Islamic sharia law, but not all individuals are bound by fatwas (i.e. Islamic law rulings) unless they are codified into legislation. Sharia law has so far impacted Indonesian laws on banking, lawful products, charity and property endowment the most. Therefore, some may view that the anti-crypto fatwa would be a toothless tiger and would not have much impact on the Indonesian crypto community unless it is incorporated into state legislation.¹²⁴

Under the civil laws that bind all Indonesian citizens, the Ministry of Trade Regulation No. 99 of 2018 classifies VAs as commodities that can be traded in a commodity exchange. The Trade Ministry's Commodity Futures Trading Regulatory Agency (BAPPEBTI) is the principal regulator. Financial services institutions are not allowed to facilitate VA transactions or promote VAs. Cryptocurrencies, in any event, are not legal tender in Indonesia.¹²⁵ VA should be registered with the BAPPEBTI.¹²⁶ The BAPPEBTI will go through the Analytical Hierarchy Process (AHP)

122 Daily Crypto Investor. (31 January 2022). *Forbidden not forgotten*. <https://dailycryptoinvestor.com/2022/01/31/forbidden-not-forgotten/>.

123 The World Bank. (31 March 2015). *Islamic Finance*. <https://www.worldbank.org/en/topic/financialsector/brief/islamic-finance>.

124 Daily Crypto Investor. (31 January 2022). *Forbidden not forgotten*. <https://dailycryptoinvestor.com/2022/01/31/forbidden-not-forgotten/>.

125 Allen & Overy. (9 February 2022). *Two sides of a (Bit)coin*. <https://www.allenoverly.com/en-gb/global/news-and-insights/publications/two-sides-of-a-bitcoin>.

126 Antara. (14 February 2022). *Indonesia Tightens Monitoring towards Crypto Assets*. Medcom.id. https://www.medcom.id/english/business/8N0G0jYK-indonesia-tightens-monitoring-towards-crypto-assets?utm_source=flipboard&utm_medium=flipboardfeed&utm_campaign=flipboardpartnership.

and may consider factors such as the VA's market capitalization and whether the VA has passed the ML/TF risk assessment.¹²⁷

The above only reflects the crypto situation in Indonesia. Islamic financing may vary among different Islamic jurisdictions. We may expect further developments in the Islamic crypto world.

Apart from religions and beliefs, governments' stances may sometimes be driven by more practical rewards such as garnering voters' support in elections and generating income.

Taxes

It is always said "Nothing is certain but death and taxes". Cryptocurrencies could generate substantial tax revenue for many jurisdictions. Legalizing them justifies tax levies. Alternatively, governments may even suggest that they have the "sovereign right to tax" crypto-related matters, regardless of the local status of cryptocurrencies. As mentioned earlier, India seems to be a follower of the sovereign right theory.

There are so many taxes to choose from and collect: income taxes, withholding taxes, capital gains tax, corporate tax, transfer taxes, value-added taxes (VATs), just to name a few.¹²⁸ Is it not tempting to levy them all, assuming that such taxes will not kill the goose that lays the crypto egg?

To answer this question, one must question the approach:¹²⁹

- What is the legal nature of VAs created? How to categorise hybrid VAs and those that change form during their lifetime? Is it a medium of exchange, store of value, an investment or ICO?
- What is the VA transaction about? Is the event a conversion, a change in capital or an income? What counts as one event or one transaction? Does the location of the blockchain matter?
- Can cryptocurrencies fit in the existing tax rules? Is a new type of tax needed? Whom to tax – the individuals, corporate entities, intermediaries, exchanges, over-the-counter (OTC, or off-exchange) desks, issuers or crypto miners?

What are the jurisdictions' answers to the above questions?

- **India:** The Indian government stated that it had the "sovereign right to tax" 30% gains generated from VA transactions like winnings from gambling activities starting from 1 April 2022. With effect from 1 July 2022, Indians who purchase

127 Situmorang, Marshall and Putri, Audria. (11 February 2022). *Indonesia: Crypto Assets: General Legal Framework Of Crypto Assets And Current Development Of Non-Fungible Tokens (NFT) In Indonesia*. Mondaq. <https://www.mondaq.com/fin-tech/1160546/crypto-assets-general-legal-framework-of-crypto-assets-and-current-development-of-non-fungible-tokens-nft-in-indonesia>.

128 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 217-223.

129 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 139 and 215.

or sell cryptocurrencies will be subject to 1% tax deducted at source.¹³⁰

- **Indonesia:** It is reported that Indonesia has started levying a 0.1% capital gains tax on crypto investments and VAT on digital asset transactions starting from 1 May 2022.¹³¹
- **Japan¹³²:** The Japanese government endorses a bundle of hefty crypto-related taxes, with which the Japan Cryptoasset Business Association (JCBA) is dissatisfied.
 - Despite the discussion between the Financial Services Agency and the JCBA in early 2021, a tax plan for the 2022 fiscal year was passed on 10 December 2021 to continue taxing token issuers once tokens hit exchanges. That is, even if the tokens have a poor sale, issuers are still required to pay the tax. Issuers will also have to pay taxes on the reserves if the market value of the listed tokens rises. Such a token issuer tax rate is around 35%. Some are concerned that such a tax framework is hostile to underfunded crypto startups and puts the cart before the horse as startups may have to issue more tokens to pay the tax.
 - Individuals are also liable to pay income tax of up to 55% on crypto gains since they are counted as “miscellaneous income”. This contrasts starkly with the around 20% tax rate for stock gains. A crypto airdrop (which usually refers to the issuers’ gifting of tokens as a marketing stunt) will exact a tax on both the issuers and the recipients.
- **Kazakhstan:** The influx of crypto miners from China since China’s crypto crackdown in 2021 has induced Kazakhstan, which has shortly escalated to becoming the second-largest Bitcoin mining centre behind the US, to raise its electricity prices and create a well-rounded crypto mining tax structure.¹³³ The Kazakh crypto mining scene will be further discussed later. Following the newly created mining tax of KZT1 kilowatt-hour (kWh) effective from 1 January 2022, the Kazakh government’s latest crypto tax proposal on 4 February 2022 is a three-part effort that might come into force by April 2022:¹³⁴
 - Increasing the newly introduced mining tax from KZT1 (USD0.0020)/kWh to KZT5 (USD0.0099)/kWh;
 - Implementing a monthly tax on each piece of crypto mining equipment and graphics processing unit, regardless of whether the miners make profits or suffer losses; and
 - Axing the VAT exemption of mining hardware.¹³⁵
- **South Korea:** a 20% crypto gain tax that was scheduled to be effective starting 1 January 2022 has been postponed to 1 January 2023 because of the crypto

130 Singh, Amitoj. (26 March 2022). *India Passes Stiff Crypto Tax Laws Despite Industry Uproar*. CoinDesk. <https://www.coindesk.com/policy/2022/03/25/indias-stiff-crypto-tax-legislation-becomes-law/>.

131 Sulaiman, Stefano. (1 April 2022). *Indonesia to impose VAT, income tax on crypto assets from May*. Reuters. <https://www.reuters.com/business/finance/indonesia-impose-vat-income-tax-crypto-assets-may-2022-04-01/>.

132 Au, Lavender and Gkritsi, Eliza. (24 December 2021). *Japan’s Taxes on Crypto Firms Are Leading Some to Leave the Country*. CoinDesk. <https://www.coindesk.com/policy/2021/12/23/japans-taxes-on-crypto-firms-are-leading-some-to-leave-the-country/>.

133 Newar, Brian. (8 February 2022). *Kazakhstan proposes power price hikes and taxes targeting crypto miners*. Cointelegraph. <https://cointelegraph.com/news/kazakhstan-proposes-power-price-hikes-and-taxes-targeting-crypto-miners>.

134 Tassev, Lubomir (10 February 2022). *Kazakhstan President Orders Government to Find All Miners and Raise Tax by April*. Bitcoin.com. <https://news.bitcoin.com/kazakhstan-president-orders-government-to-find-all-miners-and-raise-tax-by-april/>.

135 Newar, Brian. (8 February 2022). *Kazakhstan proposes power price hikes and taxes targeting crypto miners*. Cointelegraph. <https://cointelegraph.com/news/kazakhstan-proposes-power-price-hikes-and-taxes-targeting-crypto-miners>.

investors' uproar.¹³⁶ However, it appears that the timeline will ultimately be subject to the policy of the newly elected government.

- **Thailand:** A 15% capital gains tax will be imposed on income from cryptocurrency trading or mining in 2022.¹³⁷ Thailand abandoned its plan to impose a 15% withholding tax on cryptocurrency transactions because of traders' uproar¹³⁸ and will further exempt 7% VAT for VA trading on approved exchanges starting from 1 April 2022.¹³⁹

Different jurisdictions inevitably have their own crypto tax treatment. However, multi-lateral efforts should be made to avoid material discrepancies and possibly double taxation to avoid the creation of "crypto tax havens".¹⁴⁰ The Organisation for Economic Co-operation and Development (OECD) is building a standardised and cohesive crypto tax reporting framework based on the Common Reporting Standard.¹⁴¹

Mining

Crypto mining farms could afford the capability of being the modern gold mines. Thanks to its competitive electricity prices and the inrush of miners emigrating from China due to China's abovementioned crypto ban in 2021, Kazakhstan's crypto mining dynasty is experiencing a sudden rise to power and subsequently a fall from grace.

Case study 5: Kazakhstan's crypto miners

What are crypto miners? As explained previously, unlike the usual financial system in which banks keep a central ledger describing who owns what, cryptocurrencies have decentralised this ledger. Who verifies then that transactions are valid and people are not spending the same coin two times? The answer is miners.

Crypto mining involves very powerful computers scattered around the world. These work in competition with each other to add the next block of transactions to the blockchain, the shared ledger. The winner of the competition doesn't simply confirm transaction, but creates new cryptocurrency that constitutes their reward. In the case of Bitcoin, the process lasts on average 10 minutes, with a new competition starting when the previous ends.

Mining in Kazakhstan is not prohibited by law. What is not allowed, however, according to the Law "On Informatisation" No. 418-V/2015, are transactions with cryptocurrency. This obstacle can be easily bypassed if a foreign mining company opens a local subsidiary that mines cryptocurrency which is then owned by the mother foreign company, located in a crypto-transaction friendly country.

136 Park, Danny. (1 December 2021). *Crypto tax delay is a chance for South Korea to fix loopholes, experts say*. Forkast. <https://forkast.news/experts-urge-korea-crypto-tax-loopholes-fix/>.

137 Sakshi, K S. (24 February 2022). *Bank of Thailand to test and implement CBDC in Q2 2022; increased momentum in the crypto market prevails*. The Global Economics. <https://www.theglobaleconomics.com/2022/02/24/bank-of-thailand/>.

138 Reed, John. (31 January 2022). *Thailand axes planned 15% cryptocurrency tax*. Financial Times. <https://www.ft.com/content/df0dde72-5d2e-42cd-9792-de4d02b25b73>.

139 Gkritsi, Elisa. (10 March 2022). *Thailand Eases Tax Rules on Digital Assets Until 2023*. CoinDesk. <https://www.coindesk.com/policy/2022/03/08/thailand-eases-tax-rules-on-digital-assets-until-2023/>.

140 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 216.

141 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 221.

While there are dozens of “white miners” who are diligently registered and authorised to operate, many more are counted among the “grey” ones. Those who mine illegally are not impacted by government sanctions or regulations, as they operate covertly in urban areas where it is much more difficult to discover them.¹⁴²

As the world’s second-largest Bitcoin mining hub just behind the US, Kazakhstan is enjoying an annual revenue of USD 230 million and expects crypto mining to further bring home an estimated revenue of USD 1.5 billion within the next five years. It is reported that the revenue figure may be doubled if grey mining (i.e. crypto mining projects operated by unregistered miners) are also included in the calculation.¹⁴³ The Kazakh government has ordered authorities to locate all legal and illegal crypto miners in February 2022. 13 unauthorised crypto farms were already consequently busted within less than a month.¹⁴⁴

Electricity is the pulse of mining, but the sudden surge of crypto mining has milked Kazakhstan’s power dry. Due to energy shortage, Kazakhstan unplugged crypto mining farms from 24 January to 31 January, which was eventually extended to 7 February 2022.^{145/146} Before this incident, Kazakhstan had once cut off 15% of the national internet access in response to a protest in early January 2022.¹⁴⁷

The Kazakh law allows electricity imports only when the state-run Kazakhstan Electricity Grid Operating Company warns of a risk of power deficit.¹⁴⁸ Sourcing energy from other countries to alleviate power outages could escalate the situation to a geopolitical level as it may add bargaining power to the energy-exporting countries. This could make Kazakhstan vulnerable to higher rates and potentially an energy crisis. Political and geopolitical drivers will be further discussed in the next sub-section.

Kazakhstan’s increasingly burdensome crypto mining tax proposal, as mentioned above amid power blackouts, has reportedly expelled 30% of miners to other countries that provide cheaper power, cleaner energy and a colder environment (as mining also generates heat), such as Russia, the US and Iceland respectively.¹⁴⁹ Sustainable development will be discussed later.

142 More discussion in: Perzadayeva, Saniya. (27 January 2022). “Is Crypto Still Alive In Kazakhstan?”. Conventus Law. <https://conventuslaw.com/report/is-crypto-still-alive-in-kazakhstan/>.

143 Sun, Zhiyuan. (29 October 2021). *Kazakhstan expects at least \$1.5B in economic activity from crypto mining within 5 years*. Cointelegraph. <https://cointelegraph.com/news/kazakhstan-expects-at-least-1-5b-in-economic-activity-from-crypto-mining-within-5-years>.

144 Tassev, Lubomir. (23 February 2022). *Kazakhstan Cracks Down on Illegal Mining, Busts 13 Crypto Farms*. Bitcoin.com. <https://news.bitcoin.com/kazakhstan-cracks-down-on-illegal-mining-busts-13-crypto-farms/>.

145 Gizitdinov, Nariman. (25 January 2022). *Kazakhstan Unplugged Bitcoin Miners Before Blackout Hit Region*. Financial Post. <https://financialpost.com/pmn/business-pmn/kazakhstan-unplugged-bitcoin-miners-before-blackout-hit-region>.

146 Tassev, Lubomir. (3 February 2022). *Kazakhstan Extends Power Cuts for Cryptocurrency Miners*. Bitcoin.com. <https://news.bitcoin.com/kazakhstan-extends-power-cuts-for-cryptocurrency-miners/>.

147 Sigalos, MacKenzie. (7 January 2022). *Kazakhstan’s deadly protests hit bitcoin, as the world’s second-biggest mining hub shuts down*. CNBC. <https://www.cnn.com/2022/01/06/kazakhstan-bitcoin-mining-shuts-down-amid-fatal-protests.html>.

148 Tassev, Lubomir. (29 October 2021). *Russia Considers Selling Power to Kazakhstan Amid Deficit Caused by Crypto Miners*. Bitcoin.com. <https://news.bitcoin.com/russia-considers-selling-power-to-kazakhstan-amid-deficit-caused-by-crypto-miners/>.

149 Newar, Brian. (8 February 2022). *Kazakhstan proposes power price hikes and taxes targeting crypto miners*. Cointelegraph. <https://cointelegraph.com/news/kazakhstan-proposes-power-price-hikes-and-taxes-targeting-crypto-miners>.

Politics and geopolitics

Crypto policies and regulations can be driven by political calculations and power struggles.

For example, South Korea is a developed region with an impressive internet penetration rate of 96.5%. It is estimated that there are over 5 million individual crypto accounts in the top three local crypto exchanges and 10% of voters are crypto investors, which explains why political candidates had been attempting to garner voters' support with crypto-friendly policies for the election on 9 March 2022.¹⁵⁰ For example, the ruling Democratic Party changed its previous anti-crypto stance remarkably and called for the establishment of a blockchain department in Busan, which had been the only and still underappreciated blockchain regulatory free zone since 2019.¹⁵¹ Lee Kwang-jae, a withdrawn candidate from the Democratic Party, indicated his willingness to accept crypto political donations starting from mid-January 2022 to raise the public's awareness about VAs.¹⁵²

Yoon Suk-yeol, the seemingly crypto-friendly president-elect of South Korea coming from the People Power Party and a former prosecutor, has suggested reviewing and possibly reversing the 2017 ICO ban.¹⁵³ However, it remains to be seen which election promises will be realised after the new administration has settled in mid-2022.

Jurisdictions must act locally but also think globally about how the multilateral dynamics are at play. For example, the European Central Bank has been urging for the passage of the Markets in Crypto-Assets Regulation (MiCA) so that Russia could not evade sanctions towards its highly controversial acts of entering Ukraine forcibly.¹⁵⁴ Meanwhile, the Ukrainian government is accepting and has directly received over USD 10 million Bitcoin and Ether donations for the country's urgent situation. While Russian banks are being kicked out of the interbank messaging system SWIFT and the Bank of Russia is prohibited from liquidating assets or reserves, Ukraine also asked crypto exchanges to cease transactions involving Russian users.¹⁵⁵

150 Au, Lavender. (14 February 2022). *Young, Crypto-Savvy Voters May Hold Key to South Korea's Next Election*. CoinDesk. <https://www.coindesk.com/policy/2022/02/14/young-crypto-savvy-voters-may-hold-key-to-south-koreas-next-election/>.

151 Layram, Ruby. (21 November 2021). *South Korean Government Proposes Pro Crypto Policy*. Bankless Times. <https://www.banklesstimes.com/2021/11/21/south-korean-government-proposes-pro-crypto-policy/>.

152 Zimwara, Terence. (26 January 2022). *South Korean Lawmaker Says He Will Start Accepting Crypto Donations in the New Year*. Bitcoin.com. <https://news.bitcoin.com/south-korean-lawmaker-says-he-will-start-accepting-crypto-donations-in-new-year/>.

153 Barrett, Eamon. (10 March 2022). *South Korea elects new Bitcoin-friendly president, who blames feminism for low birth rates*. Fortune. <https://fortune.com/2022/03/10/south-korea-election-president-yoon-suk-yeol-bitcoin-crypto-feminism-birth-rate/>.

154 Soto, Alonso. (26 February 2022). *ECB Urges Haste on Crypto Regulation in Wake of Russian Sanctions*. Bloomberg. <https://www.bloomberg.com/news/articles/2022-02-25/ecb-urges-haste-on-crypto-regulation-amid-russian-sanctions>.

155 Bolar, Sunil. (28 February 2022). *Ukraine boosts funds via crypto channels; USD 10 million in crypto donations from around the world*. The Global Economics. <https://www.theglobaleconomics.com/2022/02/28/ukraine-crypto-funds/>.

Case study 6: Use of cryptocurrencies to evade Russia-targeted sanctions

When Russian troops invaded Ukraine in February 2022, many countries including the US, UK and European Union Member States reacted by imposing economic sanctions on Russian banks, companies and the ruling elite.

In early March, FinCEN issued a warning calling for increased surveillance regarding the possible use of cryptocurrencies by Russian individuals and companies to evade those sanctions.¹⁵⁶ The warning included red flags that could help to identify suspicious transactions.

Regulators fear that in the same way Ukraine is receiving donations from all over the world using cryptocurrencies, the politicians and oligarchs might be using the same avenues to avoid the sanctions and protect their wealth from seizures.

Cryptocurrencies could be used by those individuals for different reasons and different purposes:

- Protect their assets from freezing orders that might target their wealth if it is kept in Russian or foreign banks.
- Move their funds abroad at a time when international wire transfers from Russia are blocked and several Russian banks are unplugged from the SWIFT system for international financial transactions.
- Protect their assets from depreciation since the rouble has plunged in value from the start of the war.

After FinCEN's call for action, many crypto exchanges froze thousands of wallets connected to Russian individuals. Coinbase, one of the biggest exchanges in the world, blocked over 25,000 addresses linked to Russian individuals or companies which were believed to be engaging in illicit activities. Other exchanges are following the same steps.

The fast actions are understandable and indeed laudable given the necessity of stopping Russian aggression against Ukraine. However, are cryptocurrencies really a threat in terms of avoiding sanctions?

Even though crypto's decentralised blockchain is meant to be open and borderless, and many users are believed to be anonymous, things are not as straightforward as they seem. It is clear that Russians have been buying more crypto in the last weeks, but are they ordinary people or entities circumventing sanctions? Most likely the former.

First of all, the vast majority of exchanges have strong KYC policies in place. Binance, by far the largest crypto exchange, has a compliance team of more than 500 individuals working around the clock on sanctions monitoring like AML checks, KYC, name screening and on-chain surveillance. Politically Exposed Persons (PEPs) are usually stopped during the onboarding process and not allowed to transact. The people who have been targeted by recent sanctions are likely already on PEP lists.

¹⁵⁶ US Treasury. (7 March 2022). *FinCEN Advises Increased Vigilance for Potential Russian Sanctions Evasion Attempts*. <https://www.fincen.gov/news/news-releases/fincen-advises-increased-vigilance-potential-russian-sanctions-evasion-attempts>.

Secondly, the blockchain allows for a permanent record of all the transactions ever performed, even years after the transaction took place. Even though cryptocurrency moves between pseudonymous addresses, some patterns can link different wallets and identities together, forming a so-called “cluster”. Further analysis can in some cases link those clusters to real-world identities. This includes combining information about online crypto transactions with information gained from open or closed internet sources, such as forum posts, social media pictures and online shop purchases.

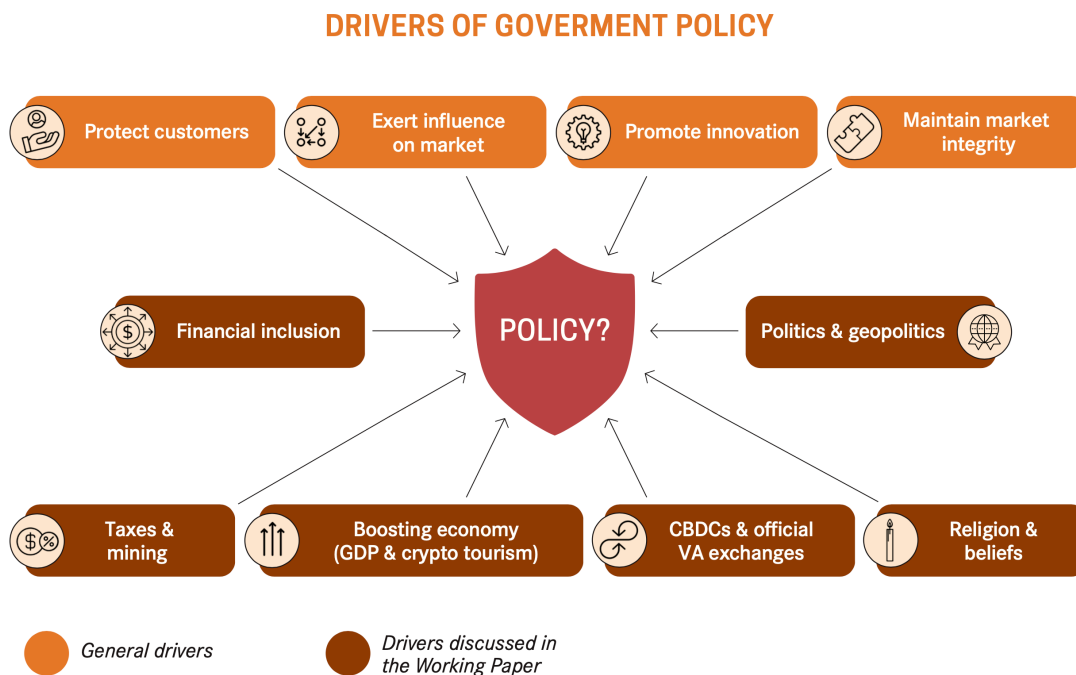
Some companies have made millions analysing different blockchains and de-anonymising entities. Law enforcement can go even further with this approach, delivering subpoenas to VASPs where criminals are trying to cash out their funds.¹⁵⁷

157 Further discussion at: The Economist. (19 March 2022). *Sanctions-dodgers hoping to use crypto to evade detection are likely to be disappointed*. <https://www.economist.com/finance-and-economics/why-crypto-is-unlikely-to-be-useful-for-sanctions-dodgers/21808188>.

2 The “golden triangle” of regulation

The nascent FinTech industry initially attracted professional and sophisticated investors to invest in it, resulting in a high level of speculation. This happened to draw in laypeople over the globe with limited crypto knowledge or relevant investing experience.

The first section of this Working Paper focused on local crypto regulations. What counts as an ideal regulation? One that should make legal, commercial and technological sense. An ideal regulation should be forward-looking, dynamic and proportionate. It should also address systemic risks (e.g. liquidity, credit, market, operational, AML/CTF risks, and other financial crimes), protect lay customers, provide a flexible environment for businesses, maintain market integrity, uphold public financial order and give legal recourses.¹⁵⁸ To recap, the drivers of government policy are shown in the below graph.



Regulators must understand the industry, investigate grey areas in the legislative framework and be willing to test the law’s limits with necessary technical expertise.¹⁵⁹ Given the cross-border nature of the crypto industry, it is vital to build a level playing field between jurisdictions to avoid creating regulatory arbitrage or a black crypto market. Self-regulation, domestic regulation, and international collaboration form a “golden triangle” in governing the global crypto industry.

158 Prodent, Lisa. (8 July 2021). *Vietnam Establishes Research Group to Study Regulations on Cryptocurrencies*. Vietnam Briefing. <https://www.vietnam-briefing.com/news/vietnam-establishes-research-group-study-regulations-cryptocurrencies-2.html/>.

159 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 210.

Interaction between the public and the private sectors plays a pivotal role as the level of expertise and knowledge of digital assets varies significantly amongst countries, including in the Asian region.

International collaboration

International collaboration often encounters several common barriers such as matters being lost in translation, and dissimilarities in institutional structures and legal systems.¹⁶⁰ It would be beneficial for there to be guidance on the definitions of key concepts and recommendations for the treatment of different types of VAs. While there are no formal international crypto treaties, international organizations have been issuing guidance and defining key concepts concerning various aspects of VAs:¹⁶¹

- FATF issued the Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers in June 2019, which extended the guidance on Recommendation 16, also known as the “travel rule”. The “travel rule” is a global set of AML/CTF standards that requires VASPs to share and disclose client information for VA transactions. However, according to FATF’s second 12-month review of progress on crypto regulation in July 2021, only 58 out of 128 jurisdictions indicated that they had implemented FATF’s standards.¹⁶²
- Committee on Payments and Market Infrastructures (CPMI) issued a Public Report in 2019 that outlined the application of the Principles for Financial Market Infrastructure (PFMIs) regarding global stablecoins.
- Financial Stability Board (FSB) published in October 2020 ten high-level recommendations that countries could adopt to advance consistent and effective regulation and supervision of global stablecoin arrangements.

Self-regulation

The benefits of self-regulation are that businesses can come together to efficiently customise and adjust their sector-specific rules and standards to meet certain goals.

In Japan, the Japan Virtual Currency Exchange Association (JVCEA) is a self-regulatory body policing the Japanese crypto industry. It is recognised by the Financial Services Agency as a “certified fund settlement business association” and has been vested with the power to pass and enforce regulations and standards for local crypto exchanges. JVCEA was originally initiated by 16 Japanese licensed crypto trading after the 2018 USD530 million hack on the Coincheck exchange.¹⁶³ It is reported that JVCEA planned to introduce FATF travel

160 Monteith, Charles and Dornbierer, Andrew. (January 2013). *Working Paper 15: Tracking and tracing stolen assets in foreign jurisdictions*. International Centre for Asset Recovery of the Basel Institute on Governance. https://baselgovernance.org/sites/default/files/2019-06/WP_15_Tracking_and_tracing.pdf, at 12.

161 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 59.

162 Lim, Michelle. (28 June 2021). *FATF: Most countries have yet to implement anti-terrorism crypto ‘travel rule’*. Forkast. <https://forkast.news/fatf-crypto-travel-rule/>.

163 Zhao, Wolfie. (13 September 2021). *Japanese Crypto Exchange Group Gets Legal Status to Self-Regulate*. CoinDesk. <https://www.coindesk.com/markets/2018/10/24/japanese-crypto-exchange-group-gets-legal-status-to-self-regulate/>.

rule-spirited self-regulatory rules by April 2022.¹⁶⁴ JVCEA announced in March 2022 that the Financial Services Agency and the Ministry of Finance had asked it to explore requiring crypto exchanges to follow the FATF guidelines.¹⁶⁵

In South Korea, the Connect Digital Exchanges (CODE) is a joint venture created by Bithumb, CoinOne, and Korbit on 31 August 2021 to work out a solution for all transactions over KRW1 million (around USD815) to comply with the FATF travel rule by 25 March 2022 as mandated by the Korean government. Around 30 VA firms partnered with CODE on this matter. With CODE's travel rule solution, transactions and customer data are recorded on nodes operated by member entities in a distributed server.¹⁶⁶

164 Au, Lavender and Gkritsi, Elisi. (17 December 2021). *Japan's Crypto Exchanges Grapple With 'Travel Rule' as Deadline Looms*. CoinDesk. <https://www.coindesk.com/policy/2021/12/17/japans-crypto-exchanges-grapple-with-travel-rule-as-deadline-looms/>.

165 Bhatia, Gauri. (30 March 2022). *Top Japanese crypto exchanges to comply with FATF 'Travel Rules'*. Our Bitcoin News. <https://ourbitcoinnews.com/top-japanese-crypto-exchanges-to-comply-with-fatf-travel-rules/>.

166 Park, Danny. (25 February 2022). *South Korean crypto businesses scramble to meet FATF travel rule*. Forkast. <https://forkast.news/headlines/south-korea-crypto-fatf-travel-rule/>.

3 Emerging trends and concerns

As the globe is tapping into the era of web 3.0 (i.e. a decentralised blockchain-based web incorporated with token-based economics) and the metaverse (i.e. a simulated digital environment that combines augmented reality, virtual reality, blockchain, and social media), VAs are further brought into the people's daily lives.^{167/168} This is potentially bringing about trends and concerns such as the below:

3.1 Green finance and environmental, social, and governance (ESG) performance

Governments and businesses are paying more attention to sustainability and social responsibility when making decisions. Crypto mining exhausts electricity and sounds like the polar opposite of green and sustainable finance. According to the Cambridge Bitcoin Electricity Consumption Index, cryptocurrencies can eat up 64.15TWh per year, exceeding many developed regions such as Switzerland's 58.46 TWh, Greece's 56.89TWh, Singapore's 47.69 TWh, Hong Kong's 41.84 TWh, and New Zealand's 39.5 TWh. To illustrate figuratively, such massive annual energy consumption, 64.15TWh is said to be capable of "powering kettles to boil water in the United Kingdom for 14 years".¹⁶⁹

Proof of work (PoW) is to blame for crypto mining's energy-hungry and environment-destroying notoriety. PoW and proof of stake (PoS) are two well-known consensus mechanisms, which refer to rules that ensure the records and transactions in the distributed ledgers or blockchains are authentic.

Under the PoW protocol, which is adopted by Bitcoin as described in case study 5, miners compete against each other using powerful computers to solve a complicated computational problem to validate a blockchain transaction. The first verifying the transaction will be rewarded cryptocurrencies.

In contrast, under the PoS protocol, which is adopted by Stellar, DASH, and EOS, one (also known as the validator) must show that they have a "stake" in the network to update the distributed ledger. The more stakes one has, the higher chance they get selected as the validator. The PoS protocol saves more time and energy. Algorand announced in April 2021 that its blockchain adopted Pure Proof of Stake and was fully carbon neutral.¹⁷⁰ Ethereum plans to switch from PoW to the PoS consensus by June 2022.¹⁷¹

167 Savov, Vlad. (21 December 2021). *Jack Dorsey Stirs Uproar by Dismissing Web3 as a Venture Capitalists' Plaything*. Bloomberg Quint. <https://www.bloombergquint.com/markets/jack-dorsey-stirs-uproar-by-dismissing-web3-as-a-vc-plaything/>.

168 XR Today. (10 January 2022). *Metaverse Meaning – What is this New World Everyone's Talking About?* <https://www.xrtoday.com/mixed-reality/metaverse-meaning/>.

169 Pidgeon, Emily. (29 July 2019). *Bitcoin uses more energy than Hong Kong, Singapore or Switzerland*. The CEO Magazine. <https://www.theceomagazine.com/business/finance/bitcoin-energy-use/>.

170 Algorand. (1 June 2021). *How Algorand Offsets its Carbon Footprint*. <https://www.algorand.com/resources/blog/how-algorand-offsets-carbon-footprint>.

171 Castor, Amy. (4 March 2022). *Why Ethereum is switching to proof of stake and how it will work*. MIT Technology Review. <https://www.technologyreview.com/2022/03/04/1046636/ethereum-blockchain-proof-of-stake/>.

The other side of the coin: could crypto mining hasten the transition to renewable energy?

It must be noted that copious research points to the fact that Bitcoin's PoW is, on the other hand, a powerful driver of the transition to renewable energy.

Renewables play a major role in Bitcoin mining, as they are often the cheapest source of power. Already in 2019, according to a study by cryptocurrency analysis firm CoinShares,¹⁷² more than 74% of Bitcoin's global energy consumption came from renewables. Nowadays, the five largest crypto mining companies are already using or building power plants relying entirely on renewable energy.¹⁷³

The growing search for cheap clean energy by miners can actually push for innovation in this sector, just like electric vehicles have done.

Countries are also making plans to achieve their carbon reduction goals as set out in the Paris Agreement. The Task Force on Climate-related Financial Disclosures (TCFD) was created in 2015 by the FSB to provide recommendations for more effective climate-related disclosures revolving around governance, strategy, risk management, and metrics and targets. The Crypto Climate Accord (CCA) is a private sector-led initiative inspired by the Paris Agreement to “decarbonise the global crypto industry by prioritizing climate stewardship and supporting the entire crypto industry's transition to net-zero greenhouse gas emissions by 2040”.^{174/175}

In Singapore, in collaboration with DBS Bank, SGX, and Standard Chartered, the government-supported investment firm Temasek will launch Climate Impact X, a blockchain-based exchange for trading carbon credits. Singapore already hosts a blockchain-driven exchange to trade renewable energy with the national electricity and gas supplier SP Group.¹⁷⁶

3.2 NFTs, game finance (GameFi) and gambling

The Former BOT Director once warned that the crypto bubble might burst in late March “when liquidity in the financial market drops due to moves by central banks to taper quantitative easing and raise interest rates.”¹⁷⁷

Although NFTs are by nature different from cryptocurrencies as NFTs are “non-fungible” (i.e. cannot be replicated) tokens while cryptocurrencies are “fungible” (i.e. can be readily interchanged), the speculation risks could be just as high as crypto trading and may therefore alert regulators.

172 <https://coinshares.com/assets/resources/Research/bitcoin-mining-network-june-2019-fidelity-foreword.pdf>

173 Yaffe-Bellany, David. (22 March 2022). *Bitcoin Miners Want to Recast Themselves as Eco-Friendly*. New York Times. <https://www.nytimes.com/2022/03/22/technology/bitcoin-miners-environment-crypto.html>.

174 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 227-228.

175 Crypto Climate Accord. (2021). *Crypto Climate Accord*. <https://cryptoclimate.org/accord/>.

176 Ozelli, Selva. (12 February 2022). *Why Singapore is one of the most crypto-friendly countries*. Cointelegraph. <https://cointelegraph.com/news/why-singapore-is-one-of-the-most-crypto-friendly-countries>.

177 Helms, Kevin. (9 February 2022). *Former Thai Central Bank Director Predicts Crypto Bubble Emerging in March*. Bitcoin.com. <https://news.bitcoin.com/former-thai-central-bank-director-predicts-crypto-bubble-emerging-march/>.

GameFi is blooming. The popular USD30 billion-worth blockchain-based play-to-earn (P2E) game Axie Infinity provides various types of in-game tokens, including utility tokens (Axie Infinity Shard), payment tokens (Smooth Love Potion), and NFT characters (Axies). The Filipino Bureau of Internal Revenue stressed that all income earned by Filipinos may be subject to tax. Therefore, investors and players could be taxed for gains derived from the blockchain games. Investors who organise and loan their e-sports teams to others could be subject to VAT. The Filipino government also plans to apply the “Howey Test” to see if those P2E games could be considered as investment contracts and thus be bound by the local securities law.¹⁷⁸ Under the Howey test, an investment contract exists when there is an investment of money in a common enterprise with a reasonable expectation of profits to be derived from the efforts of others.¹⁷⁹ If the nature of a game is a game of chance, bet or lottery, gaming platforms and crypto casinos may be legally required to apply for a gambling licence.

3.3 Antitrust issues

In general, competition law seeks to prohibit anti-competitive practices that may arise from:

- anti-competitive agreements concerning, for example, cartels, exchange of information, activities of trade associations and industry bodies, joint ventures, vertical price restrictions, and exclusive distribution and exclusive customer allocation;
- abuse of market power, for example, predatory pricing, anti-competitive tying and bundling, margin squeeze, refusals to deal, and exclusive dealing; and mergers.¹⁸⁰

Whether a blockchain or a blockchain consortium may be considered anti-competitive will depend on their degree of data sharing and the owners’ concentration of power.¹⁸¹ For example, a blockchain or a blockchain consortium that

- a. only gives access to certain members or excludes certain competitors to join;
- b. runs smart contracts that incentivise anti-competitive behaviours or discourage competitive conducts; or
- c. can view or share sensitive information of individual firms in a niche market regarding future business plans, price, and output may be subject to antitrust scrutiny.¹⁸²

178 Gorriceta, Mark. (8 October 2021). *New Frontier: NFTs and its legal impact on digital asset regulations*. The Manila Times. <https://www.manilatimes.net/2021/10/08/business/top-business/new-frontier-nfts-and-its-legal-impact-on-digital-asset-regulations/1817507>.

179 The United States Securities and Exchange Commission. (3 April 2019). *Framework for “Investment Contract” Analysis of Digital Assets*. <https://www.sec.gov/files/dlt-framework.pdf>.

180 The Competition Commission (Hong Kong). (2022). *Competition & Anti-Competitive Practices*. https://www.compcomm.hk/en/practices/what_is_comp/overview.html.

181 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 198.

182 Zaslavsky, Sergei. (9 January 2019). *Insight: Blockchain and Antitrust: How Counsel Can Mitigate Risk*. Bloomberg BNA. https://www.omm.com/omm_distribution/antitrust/Bloomberg_BNA_Blockchain_and_Antitrust.pdf.

In a US case *United American Corporation v Bitmain Incorporated and others*¹⁸³, the defendants were accused of conspiring with software developers and businesses to manipulate the Bitcoin Cash crypto market. Although limited sector-specific observations had been drawn, the claim and the amended claim were both dismissed using existing competition law principles by the US District Court for the Southern District of Florida respectively in February 2020 and March 2021 at an early stage.¹⁸⁴

Data protection

As mentioned previously, AML/CTF requirements seem to be the baseline regulation of many jurisdictions. Some jurisdictions such as South Korea also domesticate the FATF travel rule. Some are concerned that excessive customer due diligence could be an invasion of privacy and a compromise on the anonymous feature of DLT.

Yet others see the need to turn to privacy coins and even the dark web. Privacy coins such as Monero and Zcash are cryptocurrencies that preserve a higher level of anonymity to users than general cryptocurrencies by using disposable stealth addresses for each transaction, hiding transaction particulars, and bundling genuine and red herring individual transactions.¹⁸⁵ Unlike common perceptions, not all users surfing the dark web are criminals. Some purely use it to remain anonymous, avoid the monetization of personal information by corporations, or stay away from government surveillance.

Still, privacy coin structures are not uncrackable and the dark web activities are not untraceable. In other words, a high level of anonymity is not perfect anonymity. It is true that what goes on the blockchain and the internet, stays on the blockchain and the internet. Permanent erasure is virtually impossible. The line of what constitutes personal data (i.e. information that can identify a person directly or indirectly) also becomes blurry. For example, pseudonymous transactional data could become personal data by re-identification (i.e. by linking publicly available records and inferring information).¹⁸⁶

To tackle re-identification risks, a zero-knowledge proof (ZKP) could be the privacy-preserving solution to minimise data collection for verification purposes. With ZKP, a party can cryptographically prove that they possess certain knowledge without revealing the actual information. Third parties such as government departments could be engaged to verify the authenticity of the information.¹⁸⁷

Given the cross-border nature of DLT, firms must look out for data security compliance implications. For example, the European Union (EU) General Data Protection Regulation (GDPR) has an extraterritorial reach and applies to companies that “targets individuals in the EU by offering them products or services; or (b) monitors their behaviour, as far as that behaviour takes place in the EU”.¹⁸⁸

183 Case No. 1-18-cv-25106 (S.D. Fla.)

184 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 201-203.

185 Stevens, Robert. (11 January 2022). *What Are Privacy Coins and Are They Legal?* CoinDesk. <https://www.coindesk.com/learn/what-are-privacy-coins-and-are-they-legal/>.

186 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 145-148.

187 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 149-153.

188 Sidley Austin LLP. (July 2019). *The Extra-Territorial Reach of EU Data Protection Law*. <https://www.sidley.com/en/insights/publications/2019/07/the-extra-territorial-reach-of-eu-data-protection-law>.

In China, the Personal Information Protection Law (PIPL) and the Data Security Law (DSL) came into force on 1 September 2021 and 1 November 2021 respectively. Under the DSL, data stored and collected in China are categorised based on their potential impact on Chinese national security, and their storage and transfer are governed following the classification. Data activities in China are subject to the DSL, as well as those taking place extraterritorially if the activities jeopardise China's national security or public interest. The PIPL covers all types of data activities involving personal information of data subjects in China, as well as activities conducted outside China that are aimed at providing products or services to individuals in China or monitoring their behaviour.¹⁸⁹

3.4 Property law and intellectual property (IP) rights

A real estate-backed NFT was sold at USD 653,000 in February 2022. The NFT proves ownership of the concerned house in Florida and can be used as collateral for crypto borrowers and lenders.¹⁹⁰ Meanwhile, a plot of completely virtual land was sold at USD 2.43 million in the Decentraland, a digital world.¹⁹¹

By categorizing VAs as property (for legal purposes or otherwise), it means that they afford proprietary rights alongside personal rights. In an English case *AA v Persons Unknown*, and an HK case *Nico Constantijn Antonius Samara v Stive Jean Paul Dan*¹⁹², both the UK and Hong Kong Courts agreed that cryptocurrencies were property and could be the subject of a proprietary injunction.

IP rights issues in the virtual world may concern copyrights, trademarks, designs, database rights, patents, trade secrets, and confidential information.¹⁹³ For example:

- Do DLT programmers enjoy database rights?
- Does each automatically generated smart contract create a new IP?
- How should IP rights be allocated between the platform developer and the intermediary that uses and modifies the platform?
- Should an entirely autonomous AI entity be granted legal personality?
- Should the developers and promoters owe fiduciary duties and bear accomplice liability if a completely automated DLT goes wrong?

189 Skadden, Arps, Slate, Meagher & Flom LLP. (3 November 2021). *China's New Data Security and Personal Information Protection Laws: What They Mean for Multinational Companies*. <https://www.skadden.com/Insights/Publications/2021/11/Chinas-New-Data-Security-and-Personal-Information-Protection-Laws>.

190 Chittum, Morgan. (14 February 2022). *A Real Estate-Backed NFT Sold For \$653,000*. Blockworks. <https://blockworks.co/a-real-estate-backed-nft-sold-for-653000/>.

191 Rosen, Phil. (25 November 2021). *A plot of digital land was just sold in the metaverse for \$2.43 million – more than most homes in NYC and San Francisco cost*. Markets Insider. <https://markets.businessinsider.com/news/currencies/metaverse-property-decentraland-sale-price-mana-coin-cryptocurrency-2021-11>.

192 [2019] HKCFI 2718

193 The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). at 158-171.

For some NFTs, the underlying copyrights may not be transferred to the NFT buyers, so that the original creators may still be free to reproduce, distribute, and sell the collection.¹⁹⁴

3.5 Dispute resolution

Because of the different pandemic-induced travel controls and quarantine requirements imposed over the globe as a result of the COVID-19 pandemic, people are actively considering on-chain and off-chain alternative dispute resolution mechanisms that provide more flexibility. These include online arbitration, blockchain-based negotiation and the use of AI-powered predictive analytics bots. It would be prudent for parties to consider carefully the drafting of contract clauses on the governing law, jurisdiction and dispute resolution methods.

Jurisdictions are also developing their court procedures and training their judicial officers to solve technology-specific cases. For example, in addition to setting up Internet Courts, China issued the Provisions on Several Issues concerning the Hearing of Cases by Internet Courts in 2018 to encourage the admission of blockchain evidence¹⁹⁵ and the Rules of Online Litigation of the People's Court of China in 2021 to further provide practical guidelines to courts.¹⁹⁶

194 Gorríceta, Mark. (8 October 2021). *New Frontier: NFTs and its legal impact on digital asset regulations*. The Manila Times. <https://www.manilatimes.net/2021/10/08/business/top-business/new-frontier-nfts-and-its-legal-impact-on-digital-asset-regulations/1817507>.

195 Du, Guodong and Yu Meng. (29 March 2021). *When Blockchain Meets Electronic Evidence in China's Internet Courts*. Chia Justice Observer. <https://www.chinajusticeobserver.com/a/when-blockchain-meets-electronic-evidence-in-china-s-internet-courts>.

196 Herbert Smith Freehills. (9 July 2021). *Rules of Online Litigation of the People's Court of China launched*. <https://hsfnotes.com/asiadisputes/2021/07/09/rules-of-online-litigation-of-the-peoples-court-of-china-launched/>.

4 Broad trends in enforcement

4.1 A fast-evolving sector: fresh opportunities, new threats

The rapid evolution of the virtual assets industry, including its possibilities to launder money and commit crimes in the cyber and physical worlds, demands a rapid response from government policymakers, regulatory bodies, judicial authorities, law enforcement and the private sector. There are two main reasons why this is important.

First, it is essential to combat new threats as they arise – or if possible, anticipate them.

A current example is Decentralised Finance (DeFi) services, an emerging area of concern for virtual assets-based money laundering due to their apparently decentralised, autonomous and anonymous nature.

Likewise, markets around non-fungible tokens (NFTs), gaming and the metaverse call for greater attention by law enforcement, regulators, the private sector and developers of cyber forensics tools and techniques.

Second, the nature of virtual assets and blockchain technologies opens up fresh opportunities to combat money laundering. Organised crime groups and others that operate darknet marketplaces, launch ransomware attacks or carry out fraud schemes are increasingly using cryptocurrencies to make and receive payments and to launder their illicit funds.

This gives law enforcement an advantage, because cryptocurrency transactions are recorded permanently in a publicly accessible ledger – the blockchain. The information cannot be altered or falsified, unlike most monetary transactions in the physical world. Financial investigations can trace funds through the blockchain and gather evidence years after a crime has taken place. Also enshrined in the blockchain are errors made by criminals, which can help to reveal a suspect's identity or wider network.

4.2 Seven recommendations

At the 5th Global Conference on Criminal Finances and Cryptocurrencies¹⁹⁷ on 7–8 December, seven recommendations emerged on combating virtual assets-based money laundering and crypto-enabled crime. The annual conference is organised by the Working Group on Criminal Finances and Cryptocurrencies, a tripartite initiative of the Basel Institute on Governance, INTERPOL and Europol that dates back to 2014 and was formally established in 2016.

The recommendations are intended to guide law enforcement, judicial authorities, regulators and the private sector in broad approaches that are necessary to protect citizens and the global economy from the risks of abuse of cryptocurrencies and other virtual assets.

¹⁹⁷ See: <https://www.baselgovernance.org/5cfc>. The recommendations below were drafted following the conference by Federico Paesano and his INTERPOL and Europol colleagues in the Tripartite Working Group. They are reproduced here with permission.

1. International cooperation

Make existing channels of international cooperation stronger, faster and more proactive, to counter the lightning-fast and hyperglobal nature of virtual assets. This includes efforts to strengthen both formal and informal cooperation between law enforcement agencies and judicial authorities, as well as between law enforcement and Virtual Asset Service Providers (VASPs) based in other jurisdictions.

The virtual assets industry is hyperglobal, and criminals can operate crypto-enabled crime schemes or launder illicit funds on the other side of the world just as easily as they can at home. Transactions take place at lightning speed and are often irreversible.

Law enforcement agencies can and should maximise the use of **existing channels of both informal and formal cooperation to exchange information** that can help to identify, investigate and prosecute those using virtual assets for illicit purposes. This includes the global cooperation mechanisms provided by INTERPOL and Europol, such as the SIENA channel and the network of National Central Bureaus (NCBs), as well as bilateral and multilateral channels with VASPs based in different jurisdictions (see Recommendation 3). For example, in cases of serious and organised crimes, it should be standard practice to check names, telephone numbers and cryptocurrency addresses with Europol to cross-check with other investigations.

Speeding up information exchange and the **sending, receiving and actioning of judicial requests** should be a priority, particularly where funds need to be frozen before they are dissipated or disappear. The hyper-speed nature of virtual assets means that all and any efforts in this area will result in significantly improved outcomes for investigations, prosecutions and asset recovery.

When **resources (new techniques, best practices, new strategies) are developed** that could be useful for all law enforcement authorities, these should be **shared widely** to prevent duplication of work and ensure a consistent and harmonised response.

International cooperation should extend to developing standards and best practices in tackling virtual assets-based money laundering, as well as sharing emerging *modi operandi* and investigative techniques. Conferences, workshops and knowledge-sharing sessions are key to this effort, as well as to building the trust and relationships that are foundational for effective international cooperation.

2. Virtual asset recovery

Treat virtual assets like traditional assets – such as jewellery or artwork – to facilitate their freezing and confiscation. Easing the recovery of virtual assets helps not only to return stolen funds, but also to deter future crypto-enabled crimes and virtual assets-based money laundering.

Cryptocurrencies and other virtual assets should be regarded like any other assets in terms of implementing tried-and-testing asset recovery best practice. Recognised strategies such as pre-seizure planning and public-private collaboration have been pivotal in many jurisdictions. Approaching crypto like a complex asset has enabled agencies to recover significant amounts of crypto assets and convert them into fiat currencies through exchanges or auctions.

However, some jurisdictions have not yet taken this best practice on board in their laws and procedures. As a result, they miss opportunities to **disrupt criminality, identify illicit financial flows and recover assets** for the benefit of victims and wider society.

As the quantity of illicit assets held in the form of cryptocurrencies grows, this failure to implement international best practice will be an increasing obstacle to countries' efforts to fight financial crime.

This is because asset recovery is not only about returning criminal proceeds to victims and governments, but about preventing and deterring corruption, organised crime and other illicit activity. **Recovering illicit assets raises the risk and cost of crime**, reduces the potential reward and helps ensure that crime does not pay.

All stakeholders should actively engage in **developing and applying emerging international best practices in virtual asset recovery**. This includes sharing knowledge on ways to freeze and seize virtual assets, to manage them effectively in order to retain their value while criminal proceedings are underway, to overcome issues of volatility, and to convert them into fiat currency following the confiscation order. A good example of this is the subgroup on virtual currencies within the Asset Recovery Office (ARO) platform hosted by the European Commission, in which Europol and EU AROs participate.

3. Public-private cooperation

Establish trust and effective mechanisms for public-private cooperation to address virtual assets-based money laundering, especially between law enforcement and VASPs. Cooperation can be bilateral, multilateral or through public-private partnerships, and should cover both operational and strategic information sharing.

Combating virtual assets-based money laundering is a major ongoing challenge and requires all stakeholders to pool their expertise, information and resources.

Cryptocurrency exchanges and other VASPs – like all financial institutions – have information and technical capabilities that can **support law enforcement investigations and asset recovery**, including tools for data analysis and live monitoring. They also have the ability to blacklist users, lock accounts and contact suspects to refund stolen funds. **Close cooperation**, including via joint investigations where appropriate, can help law enforcement agencies to do more with fewer in-house resources.

Speed is another benefit of public-private cooperation. For example, transaction monitoring tools developed by exchanges can help them to identify transactions potentially linked to illegal activity. Leads can then be referred to the law enforcement agency, which can quickly send and receive the relevant information through formal legal channels. Custom follow-up is also possible in this scenario, instead of automated blocking or off-boarding by the exchange acting alone. In the case of high-priority incidents, exchanges can take immediate action.

Information-sharing at the strategic level – for example about hacking attempts, fraudulent activity, money laundering *modi operandi*, devices used, newly discovered trends, suspects and victims – can help exchanges and other VASPs to improve their defences and detection algorithms. This in turn means that law enforcement can better focus their investigations and contributes to prevention, awareness and capacity building on both sides. Collaboration on capacity building can also help specialist law enforcement units to stay at the cutting edge of developments in the virtual assets industry.

Both operational and strategic information sharing are facilitated where VASPs have **dedicated departments for cooperating with law enforcement** and other government bodies, including internationally. Contact details for such departments should be made available to all law enforcement authorities to facilitate subpoenas and requests from investigators to VASPs.

Law enforcement agencies need to be **proactive about directly approaching VASPs** and building mechanisms for cooperation and information sharing. Europol and INTERPOL can support these efforts by facilitating initial contacts. Stakeholders can also consider using **existing public-private partnerships** as a platform for exchanging information and building trust, such as the Europol Financial Intelligence Public Private Partnership (EFIPPP).

4. Harmonised regulation and its effective implementation

Ensure smart, harmonised regulation that draws on wide-ranging expertise and looks ahead to future challenges. It is essential that all national authorities implement international regulations effectively, to prevent money laundering activity simply moving to jurisdictions with weak and poorly enforced regulations.

Regulation of virtual assets is challenging because they do not easily fall into traditional categories of AML regulation such as e-money, securities or financial instruments. The nature of cryptocurrencies makes it difficult to impose regulatory requirements on the asset itself. This makes crypto assets highly vulnerable to use for illicit purposes and money laundering.

There is a strong need for specific regulations in order to set the parameters for market participants and establish a framework for investigators to approach bad actors in the system. Standards need to be **harmonised internationally**, to prevent criminals from engaging in regulatory arbitrage – simply moving their operations to jurisdictions with weak and poorly enforced regulations on virtual assets-based money laundering.

All distributed ledger technology (DLT)-based services that have elements of centralisation should be **subject to anti-money laundering and counter financing of terrorism (AML/CFT) regulations** like any other reporting entities. Given the cross-border nature of crypto assets and increased use of privacy mechanisms to conceal the source of funds or wealth, VASPs will be expected to apply a risk-based approach in evaluating the appropriate due diligence for each customer, product, transaction and asset type. Additional effort may be required to bring **DeFi platforms under supervisory control**, relying on the presence of centralised features such as the ability of a natural person or legal entity to modify smart contract features over time.

Recent regulatory developments address some of the risks associated with the use of cryptocurrencies. However, competent authorities still need to **speed up implementation of international standards**, especially of the so-called travel rule, and address consumer protection and other regulatory risks.

A forward-looking approach is also needed to address challenges around the corner, such as arising from **NFTs, the metaverse and the gaming industry**. Competent authorities should closely monitor developments in this area, and consult widely with industry and law enforcement stakeholders to more fully understand the impacts of certain policies, which may be different to those one might expect in traditional financial markets.

5. Investigative techniques and technologies

Rapidly develop, adapt and evolve investigative technologies and techniques to keep up with the criminals. In this effort, it is helpful to leverage the innovation capacity of the private sector.

As a broad modus operandi, virtual assets-based money laundering is evolving fast. Law enforcement should recognise the potential for money laundering through new forms of cryptocurrencies and other virtual assets, such as NFTs, and develop procedures to address such use.

Traditional investigative techniques such as undercover investigations and controlled delivery need to be **adapted to the current scenario**. Crypto tracing and other techniques such as tactical surveillance and analysis of transaction and tax information (financial investigation) should also be applied.

The **private sector** can be a powerful partner to law enforcement in developing and using new technologies for tracing funds held in cryptocurrencies. For example, blockchain analytics firms are responding to the challenges of tracing funds exchanged on decentralised platforms by innovating fast: new screening tools for technologies such as oracles, liquidity pools and smart contracts are already being developed.

VASPs also hold information that can help to develop new investigative techniques to address emerging technologies in the crypto sphere. **Training and joint workshops or conferences** can help to transfer this vital knowledge. Examples are those organised by the EFIPPP, the Europol Platform for Experts (EPE) and the Tripartite Working Group on Criminal Finances and Cryptocurrencies, as well as Europol's Virtual Currency Conference.

It is not only law enforcement that needs to adapt investigative techniques; **judicial authorities** also need to develop new strategies to address virtual assets-based money laundering.

6. Capacity building

Invest massively in capacity building, especially for those in law enforcement and the private sector in a position to detect virtual assets-based money laundering. Building capacity is not only about training existing staff, but about changing hiring practices to attract those already skilled in the cyber sphere.

The virtual assets industry is expanding and evolving at an incredible rate. Capacity building should be widespread, with a particular focus on:

- **Strengthening the capabilities of specialised law enforcement units** to address crypto-related threats. These units are well placed to transfer skills within their own agencies (see next point) through in-house capacity building and awareness-raising.
- **Accelerating the training of “front-line” staff in a position to detect crypto-enabled crimes.** In law enforcement, this means first responders and those involved in investigating serious organised crime, corruption and other financial crimes. In the private sector, AML compliance professionals in particular need to quickly upskill. Early detection aids investigation and the timely freezing of suspect funds before they can be dissipated or hidden.
- **Ensuring judicial authorities have the required knowledge** and capabilities to act fast when subpoenas and judicial requests are needed.
- **Ensuring AML supervisors** correctly understand new business models, their associated risks and how to address them.

Building capacity is not only about training existing staff. Hiring practices should adapt. Both law enforcement and the private sector need to attract talented “digital natives” with high levels of technical expertise. (See also Recommendation 7.)

7. Multidisciplinary approach, including through specialised law enforcement units

Combine the expertise of financial investigators, IT/forensics experts and cyber-crime specialists to tackle cases of virtual assets-based money laundering and related crypto-enabled crimes. In a law enforcement context, this means increasing intra-agency cooperation between different units. Where feasible, specialist teams could also be established to lead complex cases and provide in-house support to other units.

A multidisciplinary approach is increasingly recognised as essential to tackling complex crimes, including those of a financial nature. In the crypto sphere, this is multiplied by the high level of **specialised expertise required in IT, cybercrime and financial investigation**.

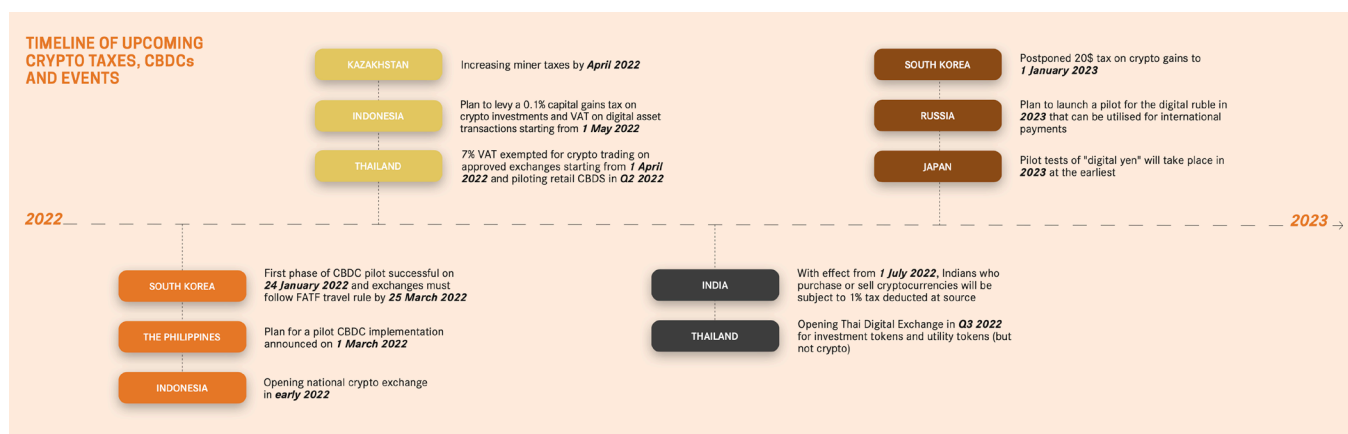
Increasing numbers of law enforcement authorities have set up **multidisciplinary units** focused on crypto-enabled crimes. However, they remain small and insufficiently resourced when one considers the relative sizes of the physical and digital domains. This is true even now, and will be even more so in the future as the digital sphere grows.

Specialised units have the ability to move fast, conduct their own investigations and support investigations led by other law enforcement units. They can and do also cooperate efficiently with central government authorities as well as internationally. An **effective and integrated multidisciplinary approach** also requires the support of specialised judicial authorities.

Where resources do not exist for dedicated specialised units in law enforcement agencies, it is recommended to introduce measures to **increase intra-agency and inter-agency coordination**. These could include multidisciplinary working groups, task forces or joint investigation teams.

5 Conclusion: Keep calm and carry on

On the topic of VAs, there are too many questions but not enough answers. Each jurisdiction has different policies and regulations tailored to its situation. Some governments want to exert influence on the market. Some note the potential of VAs and FinTech. Almost all governments are well aware of the VAs’ high-value volatility and ML/TF risks and would like to launch CBDCs to complement traditional finance. The below timeline shows the upcoming crypto taxes, CBDCs and other events in the Asian region at the time of writing of this Working Paper.



It is generally agreed that an ideal regulatory framework should encourage technological innovation while protecting consumers to maintain market integrity. The public and private sectors should also work together to build a cohesive global crypto network.

In the age of information explosion and in preparing for this Working Paper, considerable effort has been made to study the basic concepts and verify sources to ensure credibility and minimise errors. One of the research challenges is that everyone may have different understanding of the same term. For example, “Bitcoin” may be inaccurately used to refer to all cryptocurrencies and “cryptocurrencies” may be wrongly perceived as representing all virtual tokens. This obstacle highlights once again the importance of having internationally recognised, if not unified, definitions of key concepts and standards.

The complexity and breadth of VAs are worthy of in-depth discussion. Bitcoin sparked the VA big bang in 2009. Now, countless VAs sprinkle over the VA Milky Way. This Working Paper can only take a snapshot of the crypto landscape of certain jurisdictions. The crypto space is dynamic, and regulations are busy catching up. VAs are here to stay. It is a widely held axiom that we should keep calm and carry on, especially in these uncertain times.

Annex: Key terms and abbreviations

This list of key terms, abbreviations, and the common Chinese translations are for reference only.

Abbreviations	Key terms	Traditional Chinese	Simplified Chinese
AHP	Analytical Hierarchy Process	層級分析法 / 層次分析法	层级分析法 / 层次分析法
AML	Anti-Money Laundering	打擊洗錢	打击洗钱
ATM	Automatic Teller Machines	自動櫃員機	自动柜员机
BIS	Bank of International Settlements	國際結算銀行	国际结算银行
BOT	Bank of Thailand	泰國銀行	泰国银行
BSP	Bangko Sentral ng Pilipinas / Central Bank of the Philippines	菲律賓中央銀行	菲律宾中央银行
CBDC	Central Bank Digital Currency	中央銀行數位貨幣	中央银行数位货币
CCA	Crypto Climate Accord	加密氣候協定 / 加密氣候協議	加密气候协定 / 加密气候协议
CTF	Counter-Terrorist Financing	打擊恐怖分子資金籌集	打击恐怖分子资金筹集
CPMI	Committee on Payments and Market Infrastructures	支付暨市場基礎設施委員會	支付暨市场基础设施委员会
/	Cryptocurrency	加密貨幣	加密货币
DeFi	Decentralised Finance	去中心化金融	去中心化金融
DLT	Distributed Ledger Technology	分散式帳本技術	分散式帐本技术
DPT	Digital Payment Token	數碼支付代幣 / 數位付款代幣 / 數位支付型代幣	数码支付代币 / 数位付款代币 / 数位支付型代币
DSL	Data Security Law	數據安全法	数据安全法
/	Due Diligence	盡職調查	尽职调查
ESG	Environmental, social and governance	環境、社會和管治	环境、社会和管治
EU	European Union	歐洲聯盟 / 歐盟	欧洲联盟 / 欧盟
FATF	Financial Action Task Force on Money Laundering	反洗錢金融行動特別工作組 / 防制洗錢金融行動工作組織 / 財務行動特別組織	反洗钱金融行动特别工作组 / 防制洗钱金融行动工作组织 / 财务行动特别组织
FSB	Financial Stability Board	金融穩定委員會 / 金融穩定理事會	金融稳定委员会 / 金融稳定理事会
FinTech	Financial Technology	金融科技	金融科技
G7	Group of Seven	七大工業國組織	七大工业国组织
GameFi	Game Finance	遊戲化金融	游戏化金融
GDP	Gross Domestic Product	國內生產總值	国内生产总值
GDPR	General Data Protection Regulation	通用數據保障條例	通用数据保障条例

ICO	Initial Coin Offering	首次代幣發行	首次代币发行
IMF	International Monetary Fund	國際貨幣基金組織	国际货币基金组织
IRAS	Inland Revenue Authority of Singapore	新加坡稅務局	新加坡税务局
IP	Intellectual Property	知識產權	知识产权
JFIU	Joint Financial Intelligence Unit	聯合財富情報組	联合财富情报组
KYC	Know Your Customer / Know Your Client	認識你的客戶	认识你的客户
MAS	Monetary Authority of Singapore	新加坡金融管理局	新加坡金融管理局
/	Metaverse	元宇宙	元宇宙
NFT	Non-Fungible Token	非同質化代幣	非同质化代币
OECD	Organization for Economic Co-operation and Development	經濟合作暨發展組織	经济合作暨发展组织
OTC	Over-the-counter	櫃檯買賣 / 場外交易	柜台买卖 / 场外交易
PIPL	Personal Information Protection Law	個人信息保護法	个人信息保护法
PBOC	People's Bank of China	中國人民銀行	中国人民银行
/	Privacy Coin	私隱幣 / 匿名幣	私隐币 / 匿名币
PoS	Proof of Stake	權益證明	权益证明
PoW	Proof of Work	工作量證明	工作量证明
RBI	Reserve Bank of India	印度儲備銀行	印度储备银行
SBV	State Bank of Vietnam	越南國家銀行	越南国家银行
/	Stablecoin	穩定幣	稳定币
TCFD	Task Force on Climate-related Financial Disclosures	氣候相關財務揭露工作小組	气候相关财务揭露工作小组
/	Utility Token	功能型代幣	功能型代币
VA	Virtual Asset	虛擬資產	虚拟资产
VASP	Virtual Asset Service Provider	虛擬資產服務業者	虚拟资产服务业者
VAT	Value-added Tax	增值稅	增值税
ZKP	Zero-Knowledge Proof / Zero-Knowledge Protocol	零知識證明 / 零知識協議	零知识证明 / 零知识协议

References

- AA v *Persons Unknown* [2019] EWHC 3556 (Comm)
- Ak, Qadir. (8 June 2020). *Cryptocurrency Regulations in Vietnam*. CoinPedia. <https://coinpedia.org/cryptocurrency-regulation/cryptocurrency-regulations-in-vietnam/>.
- Algorand. (1 June 2021). *How Algorand Offsets its Carbon Footprint*. <https://www.algorand.com/resources/blog/how-algorand-offsets-carbon-footprint>.
- Allen & Overy. (9 February 2022). *Two sides of a (Bit)coin*. <https://www.allenoverly.com/en-gb/global/news-and-insights/publications/two-sides-of-a-bitcoin>.
- Antara. (14 February 2022). *Indonesia Tightens Monitoring towards Crypto Assets*. Medcom.id. https://www.medcom.id/english/business/8N0G0jYK-indonesia-tightens-monitoring-towards-crypto-assets?utm_source=flipboard&utm_medium=flipboardfeed&utm_campaign=flipboardpartnership.
- Au, Lavender and Gkritsi, Elisi. (17 December 2021). *Japan's Crypto Exchanges Grapple With 'Travel Rule' as Deadline Looms*. CoinDesk. <https://www.coindesk.com/policy/2021/12/17/japans-crypto-exchanges-grapple-with-travel-rule-as-deadline-looms/>.
- Au, Lavender and Gkritsi, Eliza. (24 December 2021). *Japan's Taxes on Crypto Firms Are Leading Some to Leave the Country*. CoinDesk. <https://www.coindesk.com/policy/2021/12/23/japans-taxes-on-crypto-firms-are-leading-some-to-leave-the-country/>.
- Au, Lavender. (14 February 2022). *Young, Crypto-Savvy Voters May Hold Key to South Korea's Next Election*. CoinDesk. <https://www.coindesk.com/policy/2022/02/14/young-crypto-savvy-voters-may-hold-key-to-south-koreas-next-election/>.
- Bangko Sentral ng Pilipinas. (1 March 2022). *Opening Remarks of Governor Benjamin E. Diokno for the Joint BSP-AFI Knowledge Exchange Program on Central Bank Digital Currency*. <https://www.bsp.gov.ph/SitePages/MediaAndResearch/SpeechesDisp.aspx?ItemId=915>.
- Bangko Sentral ng Pilipinas. (27 April 2022). *Project CBDCPh to Further Strengthen PH Payment System*. <https://www.bsp.gov.ph/SitePages/MediaAndResearch/MediaDisp.aspx?ItemId=6252>.
- Barrett, Eamon. (10 March 2022). *South Korea elects new Bitcoin-friendly president, who blames feminism for low birth rates*. Fortune. <https://fortune.com/2022/03/10/south-korea-election-president-yoon-suk-yeol-bitcoin-crypto-feminism-birth-rate/>.
- BBC news. (26 January 2022). *Crypto money laundering rises 30%, report finds*. <https://www.bbc.com/news/technology-60072195>.
- Beatty, Andrew. (3 June 2021). *Beyond Bitcoin and Blockchain: What DLT May Mean for Banks*. Finextra. <https://www.finextra.com/blogposting/20406/beyond-bitcoin-and-blockchain-what-dlt-may-mean-for-banks>.

- Blockchain Asset Review. (11 February 2022). *Singapore firm Blockchain Monk signs pact with the Government of Bhutan to roll out blockchain technologies in the Himalayan Kingdom*. <https://blockchainassetreview.com/singapore-firm-blockchain-monk-signs-pact-with-the-government-of-bhutan-to-roll-out-blockchain-technologies-in-the-himalayan-kingdom/>.
- Boar, Codruta Boar and Wehrli, Andreas. (January 2021). *BIS Papers No 114: Ready, steady, go? – Results of the third BIS survey on central bank digital currency*. Bank for International Settlements. <https://www.bis.org/publ/bppdf/bispap114.pdf>.
- Bolar, Sunil. (28 February 2022). *Ukraine boosts funds via crypto channels; USD 10 million in crypto donations from around the world*. The Global Economics. <https://www.theglobaleconomics.com/2022/02/28/ukraine-crypto-funds/>.
- Bryanov, Kirill. (11 February 2022). *India's finance minister waiting for consultations to decide whether to ban or regulate crypto*. Cointelegraph. <https://cointelegraph.com/news/india-s-finance-minister-waiting-for-consultations-to-decide-whether-to-ban-or-regulate-crypto>.
- Castor, Amy. (4 March 2022). *Why Ethereum is switching to proof of stake and how it will work*. MIT Technology Review. <https://www.technologyreview.com/2022/03/04/1046636/ethereum-blockchain-proof-of-stake/>.
- Cazador, Xochitl and Valle, Angélica. (13 April 2022). *El Salvador's Bitcoin Law: Understanding alternatives to government intervention*. Cointelegraph. <https://cointelegraph.com/news/el-salvador-s-bitcoin-law-understanding-alternatives-to-government-intervention>.
- Che, Chang. (27 October 2021). *DeFi: Can decentralized finance defy China's crypto controls?* SupChina. <https://supchina.com/2021/10/27/defi-can-decentralized-finance-defy-chinas-crypto-controls/>.
- Chittum, Morgan. (14 February 2022). *A Real Estate-Backed NFT Sold For \$653,000*. Blockworks. <https://blockworks.co/a-real-estate-backed-nft-sold-for-653000/>.
- Clifford Chance. (18 April 2022). *New Omnibus Act for Singapore's Financial Sector – Financial Services and Markets Act 2022*. <https://www.cliffordchance.com/briefings/2022/04/new-omnibus-act-for-singapore-financial-sector.html>.
- CoinCu. (8 February 2022). *Singapore isn't exactly the promised land for virtual currency business*. <https://news.coincu.com/62418-singapore-isnt-exactly-the-promised-land-for-virtual-currency-business/>.
- CoinCulture. (15 February 2022). *New Regulations Force Bitcoin ATMs To Close In Singapore*. <https://coinculture.com/au/policy-regulation/bitcoin-atms-forced-shut-down-singapore/>.
- Crypto Climate Accord. (2021). *Crypto Climate Accord*. <https://cryptoclimate.org/accord/>.
- Daily Crypto Investor. (31 January 2022). *Forbidden not forgotten*. <https://dailycryptoinvestor.com/2022/01/31/forbidden-not-forgotten/>.

- Du, Guodong and Yu Meng. (29 March 2021). *When Blockchain Meets Electronic Evidence in China's Internet Courts*. Chia Justice Observer. <https://www.chinajusticeobserver.com/a/when-blockchain-meets-electronic-evidence-in-china-s-internet-courts>.
- Dobberstein, Laura. (24 January 2022). *Myanmar's military junta seeks ban on VPNs and digital currency*. The Register. https://www.theregister.com/2022/01/24/myanmar_military_junta_bans_vpns_crypto/.
- Feng, Coco. (16 December 2021). *Beijing court rules bitcoin mining contracts 'invalid', advises local governments to shut down remaining farms*. South China Morning Post. <https://www.scmp.com/tech/big-tech/article/3159910/beijing-court-rules-bitcoin-mining-contracts-invalid-advises-local?module=inline&pgtype=article>.
- Feng, Coco. (23 August 2021). *Court in China says cryptocurrency 'not protected by law' in ruling that could set a precedent for bitcoin lawsuits*. South China Morning Post. <https://www.scmp.com/tech/policy/article/3146026/court-china-says-cryptocurrency-not-protected-law-ruling-could-set>.
- Feng, Coco. (25 February 2022). *Cryptocurrency fundraising is a criminal offence in China under new legal interpretation from Supreme Court*. South China Morning Post. <https://www.scmp.com/tech/policy/article/3168346/cryptocurrency-fundraising-criminal-offence-china-under-new-legal>.
- Fintechnews Singapore. (11 February 2022). *Thailand's Financial Regulator Lays out Plans for Payments Using Digital Assets*. <https://fintechnews.sg/59074/thailand/thailands-financial-regulator-lays-out-plans-for-payments-using-digital-assets/>.
- Frankel, Jeffrey. (24 September 2021). *El Salvador's adoption of bitcoin as legal tender is pure folly*. The Guardian. <https://www.theguardian.com/business/2021/sep/24/el-salvador-adoption-of-bitcoin-as-legal-tender-is-pure-folly>.
- Fintechnews Singapore. (18 January 2021). *Singapore Fintech Report 2021: Blockchain Dominates Singapore's Fintech Scene*. <https://fintechnews.sg/47131/studies/singapore-fintech-report-2021-blockchain-dominates-singapores-fintech-scene/>.
- Ghosh, Monika. (10 December 2021). *India's crypto bill to impose jail and US\$2.65M fines for violations*. Forkast. <https://forkast.news/india-crypto-bill-rules-jail-time-violations/>.
- Gizitdinov, Nariman. (25 January 2022). *Kazakhstan Unplugged Bitcoin Miners Before Blackout Hit Region*. Financial Post. <https://financialpost.com/pmnbusiness-pmn/kazakhstan-unplugged-bitcoin-miners-before-blackout-hit-region>.
- Gkritsi, Elisa. (10 March 2022). *Thailand Eases Tax Rules on Digital Assets Until 2023*. CoinDesk. <https://www.coindesk.com/policy/2022/03/08/thailand-eases-tax-rules-on-digital-assets-until-2023/>.
- Gkritsi, Eliza. (13 April 2022). *Chinese Banking Associations Target NFTs*. CoinDesk. <https://www.coindesk.com/policy/2022/04/13/chinese-banking-associations-target-nfts/>.

- Gkritsi, Eliza. (14 September 2021). *Crypto Trading Isn't Protected by Law, Shandong Province High Court Says*. CoinDesk. <https://www.coindesk.com/markets/2021/08/23/crypto-trading-isnt-protected-by-law-shandong-province-high-court-says/>.
- Gkritsi, Eliza. (18 February 2022). *China Casts Long Shadow Over Hong Kong's Once-Vibrant Crypto Industry*. CoinDesk. <https://www.coindesk.com/layer2/2022/02/17/china-casts-long-shadow-over-hong-kongs-once-vibrant-crypto-industry/>.
- Gkritsi, Eliza. (2 November 2021). *Ant Group, Tencent, JD.com Sign NFT 'Self-Regulation' Convention*. CoinDesk. <https://www.coindesk.com/policy/2021/11/01/ant-group-tencent-jdcom-sign-nft-self-regulation-convention/>.
- Gorriceta, Mark. (8 October 2021). *New Frontier: NFTs and its legal impact on digital asset regulations*. The Manila Times. <https://www.manilatimes.net/2021/10/08/business/top-business/new-frontier-nfts-and-its-legal-impact-on-digital-asset-regulations/1817507>.
- Griffiths, James. (7 February 2022). *At the Olympics, China's digital yuan is off to a less-than-golden start*. The Globe and Mail. <https://www.theglobeandmail.com/business/article-at-the-olympics-chinas-digital-yuan-is-off-to-a-less-than-golden-start/>.
- Helms, Kevin. (10 February 2022). *Fitch Ratings Downgrades El Salvador Deeper Into Junk Status Citing Bitcoin Risks*. Bitcoin.com. <https://news.bitcoin.com/fitch-ratings-downgrades-el-salvador-deeper-into-junk-status-bitcoin-risks/>.
- Helms, Kevin. (25 February 2021). *India Unveils Guidelines for Crypto Advertising*. Bitcoin.com. <https://news.bitcoin.com/india-unveils-guidelines-for-crypto-advertising/>.
- Helms, Kevin. (9 February 2022). *Former Thai Central Bank Director Predicts Crypto Bubble Emerging in March*. Bitcoin.com. <https://news.bitcoin.com/former-thai-central-bank-director-predicts-crypto-bubble-emerging-march/>.
- Herbert Smith Freehills. (9 July 2021). *Rules of Online Litigation of the People's Court of China launched*. <https://hsfnotes.com/asiadisputes/2021/07/09/rules-of-online-litigation-of-the-peoples-court-of-china-launched/>.
- Hong Kong Monetary Authority, Bank of Thailand, Central Bank of the United Arab Emirates and Digital Currency Institute of the People's Bank of China. (23 February 2021). *Joint statement on the Multiple Central Bank Digital Currency (m-CBDC) Bridge Project*. <https://www.hkma.gov.hk/eng/news-and-media/press-releases/2021/02/20210223-3/>.
- Indochine Counsel. (2 November 2021). *Comparative guide on cryptocurrency legislations and guidelines in Vietnam*. Vietnam Investment Review. <https://vir.com.vn/comparative-guide-on-cryptocurrency-legislations-and-guidelines-in-vietnam-88833.html>.
- Jha, Prashant. (13 December 2021). *Myanmar shadow government declares stablecoin USDT an official currency*. Cointelegraph. <https://cointelegraph.com/news/myanmar-shadow-government-declares-stablecoin-usdt-an-official-currency>.

- Jones, Marc. (22 April 2022). *Russia makes 'digital' rouble, home-grown credit card push*. Reuters. <https://www.reuters.com/business/finance/russia-makes-digital-rouble-home-grown-credit-card-push-2022-04-21/>.
- Joseph Tan Jude Benny LLP. (13 May 2021). *Crypto regulation in Singapore and Thailand*. Asia Business Law Journal. <https://law.asia/crypto-regulation-singapore-thailand/>.
- Kaaru, Steve. (11 February 2022). *Myanmar: Military gov't mulls digital currency but World Bank shoots it down*. <https://coingeek.com/myanmar-military-govt-mulls-digital-currency-but-world-bank-shoots-it-down/>.
- Kanae, Hiroyuki and Miyake, Hidetaka. (2021.) *Case Study of the Coincheck Cryptocurrency Hack*. Anderson Mori & Tomotsune. https://www.amt-law.com/en/publications/detail/publication_0022595_en_001.
- Knight, Oliver. (29 April 2022). *Central African Republic Adopts Bitcoin as Legal Tender*. CoinDesk. <https://www.coindesk.com/business/2022/04/27/central-african-republic-adopts-bitcoin-as-legal-tender/>.
- Lansky, Jan. (January 2018). *Possible State Approaches to Cryptocurrencies*. Journal of Systems Integration. 2018/1. <https://pdfs.semanticscholar.org/c14a/cbbb00b5baee7f10b24d224d429ee6b39e0e.pdf>.
- Layram, Ruby. (21 November 2021). *South Korean Government Proposes Pro Crypto Policy*. Bankless Times. <https://www.banklesstimes.com/2021/11/21/south-korean-government-proposes-pro-crypto-policy/>.
- Lian, Anndy. (24 January 2022). *Where does Singapore's crypto policy go from here?* Forkast. <https://forkast.news/where-does-singapores-crypto-policy-go-from-here/>.
- Lim, Michelle. (28 June 2021). *FATF: Most countries have yet to implement anti-terrorism crypto 'travel rule'*. Forkast. <https://forkast.news/fatf-crypto-travel-rule/>.
- Linklaters Zhao Sheng. (14 February 2022). *China's Crypto Ban Extends to a Wider Range of Crypto-based Activities*. https://lpscdn.linklaters.com/knowledge/-/media/digital-marketing-image-library/files/06_ckp/2022/february/20220214-llzs-china-s-crypto-ban-extends-to-a-wider-range-of-crypto-based-activities.ashx?rev=f5878c17-ac2a-4941-a126-fe98570fdeeb&extension=pdf.
- Madhok, Diksha. (8 February 2022). *India wants to launch a digital rupee and tax crypto profits*. CNN Business. <https://edition.cnn.com/2022/02/01/investing/india-budget-digital-rupee/index.html>.
- Magnus, Stephanie, Tan, Eunice and Liew, Ying Yi. (26 February 2022). *Singapore: New MAS guidance restricts public marketing of cryptocurrencies*. Lexology. <https://www.lexology.com/library/detail.aspx?g=2178645c-4108-495b-b990-c27852ef67b1>.
- Majcher, Kristin. (9 February 2022). *El Salvador plans to issue first bitcoin bond next month*. The Block. <https://www.theblockcrypto.com/post/133720/el-salvador-plans-to-issue-first-bitcoin-bond-next-month>.

- McDonald, Michael D. (22 November 2021). *El Salvador Plans Tokenized Bitcoin Bonds and Tax-Free 'Bitcoin City'*. Bloomberg Quint. <https://www.bloombergquint.com/business/el-salvador-plans-1b-in-tokenized-bitcoin-bonds-bukele-says>.
- McDonald, Michael. (7 February 2022). *El Salvador Hires AlphaPoint to Fix Bitcoin Digital Wallet Bugs*. Bloomberg Quint. <https://www.bloombergquint.com/onweb/el-salvador-hires-alphapoint-to-fix-bitcoin-digital-wallet-bugs>.
- Monteith, Charles and Dornbierer, Andrew. (January 2013). *Working Paper 15: Tracking and tracing stolen assets in foreign jurisdictions*. International Centre for Asset Recovery of the Basel Institute on Governance. https://baselgovernance.org/sites/default/files/2019-06/WP_15_Tracking_and_tracing.pdf.
- Namcios. (8 March 2022). *How law enforcement seized 94,000 bitcoins from Bitfinex*. Bitcoin Magazine. <https://bitcoinmagazine.com/technical/how-authorities-found-bitfinex-bitcoin>.
- Newar, Brian. (5 January 2022). *El Salvador prepares 20 bills to provide legal framework for Bitcoin bonds*. Cointelegraph. <https://cointelegraph.com/news/el-salvador-prepares-20-bills-to-provide-legal-framework-for-bitcoin-bonds>.
- Newar, Brian. (8 February 2022). *Kazakhstan proposes power price hikes and taxes targeting crypto miners*. Cointelegraph. <https://cointelegraph.com/news/kazakhstan-proposes-power-price-hikes-and-taxes-targeting-crypto-miners>.
- News Wires. (27 April 2022). *Central African Republic adopts bitcoin as legal currency*. France 24. <https://www.france24.com/en/africa/20220427-central-african-republic-adopts-bitcoin-as-legal-currency>.
- Nguyen, Daisy. (23 September 2020). *Cryptocurrency is not a legal payment method in Vietnam: C.bank*. Vietnam Insider. <https://vietnaminsider.vn/cryptocurrency-is-not-a-legal-payment-method-in-vietnam-c-bank/>.
- Noble, Luz Wendy T. (7 February 2022). *BSP unlikely to issue digital currency*. BusinessWorld. <https://www.bworldonline.com/bsp-unlikely-to-issue-digital-currency/>.
- Bhatia, Gauri. (30 March 2022). *Top Japanese crypto exchanges to comply with FATF 'Travel Rules'*. Our Bitcoin News. <https://ourbitcoinnews.com/top-japanese-crypto-exchanges-to-comply-with-fatf-travel-rules/>.
- Outlook. (8 April 2022). *India To Start CBDC Pilot, Testing Soon: RBI Deputy Governor*. <https://www.outlookindia.com/business/india-to-start-cbdc-pilot-testing-soon-rbi-deputy-governor-news-190716>.
- Ozelli, Selva. (12 February 2022). *Why Singapore is one of the most crypto-friendly countries*. Cointelegraph. <https://cointelegraph.com/news/why-singapore-is-one-of-the-most-crypto-friendly-countries>.
- Pan, David. (14 September 2021). *Shanghai Government Invests \$5M in Blockchain Startup Conflux*. CoinDesk. <https://www.coindesk.com/business/2021/01/12/shanghai-government-invests-5m-in-blockchain-startup-conflux/>.

- Park, Danny. (1 December 2021). *Crypto tax delay is a chance for South Korea to fix loopholes, experts say*. Forkast. <https://forkast.news/experts-urge-korea-crypto-tax-loopholes-fix/>.
- Park, Danny. (25 February 2022). *South Korean crypto businesses scramble to meet FATF travel rule*. Forkast. <https://forkast.news/headlines/south-korea-crypto-fatf-travel-rule/>.
- Partz, Helen. (22 February 2022). *Tourism in El Salvador up 30% since Bitcoin adoption, minister says*. Cointelegraph. <https://cointelegraph.com/news/tourism-in-el-salvador-up-30-since-bitcoin-adoption-minister-says>.
- Perzadayeva, Saniya. (27 January 2022). *“Is Crypto Still Alive In Kazakhstan?”*. Conventus Law. <https://conventuslaw.com/report/is-crypto-still-alive-in-kazakhstan/>.
- Peterson, Anrea. (3 January 2014). *Hal Finney received the first Bitcoin transaction. Here’s how he describes it*. The Washington Post. <https://www.washingtonpost.com/news/the-switch/wp/2014/01/03/hal-finney-received-the-first-bitcoin-transaction-heres-how-he-describes-it/>.
- Pidgeon, Emily. (29 July 2019). *Bitcoin uses more energy than Hong Kong, Singapore or Switzerland*. The CEO Magazine. <https://www.theceomagazine.com/business/finance/bitcoin-energy-use/>.
- Polkuamdee, Nuntawun. (24 December 2021). *SET to launch digital asset exchange*. Bangkok Post. <https://www.bangkokpost.com/business/2236971/set-to-launch-digital-asset-exchange>.
- Press Trust of India. (3 February 2022). *India will not make any crypto asset a legal tender: Finance Secretary*. The News Minute. <https://www.thenewsminute.com/article/india-will-not-make-any-crypto-asset-legal-tender-finance-secretary-160571>.
- Prodent, Lisa. (8 July 2021). *Vietnam Establishes Research Group to Study Regulations on Cryptocurrencies*. Vietnam Briefing. <https://www.vietnam-briefing.com/news/vietnam-establishes-research-group-study-regulations-cryptocurrencies-2.html/>.
- Qureshi, Mehab. (30 November 2021). *From ban to regulation, cryptocurrency’s journey so far in India*. The Indian Express. <https://indianexpress.com/article/technology/crypto/cryptocurrency-in-india-a-look-at-the-regulatory-journey-of-cryptocurrencies-7648767/>.
- Reed, John. (31 January 2022). *Thailand axes planned 15% cryptocurrency tax*. Financial Times. <https://www.ft.com/content/df0dde72-5d2e-42cd-9792-de4d02b25b73>.
- Renteria, Nelson and Garrison, Cassandra. (3 September 2021). *Majority of Salvadorans do not want bitcoin, poll shows*. Reuters. <https://www.reuters.com/technology/majority-salvadorans-do-not-want-bitcoin-poll-shows-2021-09-02/>.
- Reuters. (25 May 2021). *Bank Indonesia joins global c.bank push for digital currencies*. <https://www.reuters.com/article/indonesia-cenbank-cryptocurrency/bank-indonesia-joins-global-c-bank-push-for-digital-currencies-idUSL2N2NCONX?rpc=401&>.

- Renteria, Nelson. (23 March 2022). *El Salvador postpones bitcoin bond issue, expects better conditions*. Reuters. <https://www.reuters.com/technology/el-salvador-postpones-bitcoin-bond-issue-expects-better-conditions-2022-03-22/>.
- Rosen, Phil. (25 November 2021). *A plot of digital land was just sold in the metaverse for \$2.43 million – more than most homes in NYC and San Francisco cost*. Markets Insider. <https://markets.businessinsider.com/news/currencies/metaverse-property-decentraland-sale-price-mana-coin-cryptocurrency-2021-11>.
- Roy, Avik. (9 June 2021). *El Salvador's Bitcoin Law: Full English Text*. The Foundation for Research on Equal Opportunity. <https://freopp.org/el-salvadors-bitcoin-law-full-proposed-english-text-9a2153ad1d19>.
- Royal Monetary Authority of Bhutan. (2021). *2021 annual report*. [http://www.rma.org.bt/RMA Publication/Annual Report/Annual Report 2020-2021.pdf](http://www.rma.org.bt/RMA%20Publication/Annual%20Report/Annual%20Report%2020-2021.pdf).
- Royal Monetary Authority of Bhutan. (September 2021). *Press release*. https://www.rma.org.bt/what_news.jsp?newId=334.
- Sakshi, K S. (24 February 2022). *Bank of Thailand to test and implement CBDC in Q2 2022; increased momentum in the crypto market prevails*. The Global Economics. <https://www.theglobaleconomics.com/2022/02/24/bank-of-thailand/>.
- Savov, Vlad. (21 December 2021). *Jack Dorsey Stirs Uproar by Dismissing Web3 as a Venture Capitalists' Plaything*. Bloomberg Quint. <https://www.bloomberqqint.com/markets/jack-dorsey-stirs-uproar-by-dismissing-web3-as-a-vc-plaything>.
- Schwartz, Molly. (21 February 2022). *Russia's Finance Ministry Submits Draft Cryptocurrency Regulations*. The Moscow Times. <https://www.themoscowtimes.com/2022/02/21/crypto-a76437>.
- Shah, Saqib. (14 June 2021). *Thailand bans meme coins and NFTs as part of crypto crackdown*. Engadget. <https://www.engadget.com/thailand-bans-meme-coins-nft-113518980.html>.
- Sidley Austin LLP. (July 2019). *The Extra-Territorial Reach of EU Data Protection Law*. <https://www.sidley.com/en/insights/publications/2019/07/the-extra-territorial-reach-of-eu-data-protection-law>.
- Sigalos, MacKenzie. (19 December 2021). *Inside China's underground crypto mining operation, where people are risking it all to make bitcoin*. CNBC News. <https://www.cnbc.com/2021/12/18/chinas-underground-bitcoin-miners-.html>.
- Sigalos, MacKenzie. (7 January 2022). *Kazakhstan's deadly protests hit bitcoin, as the world's second-biggest mining hub shuts down*. CNBC. <https://www.cnbc.com/2022/01/06/kazakhstan-bitcoin-mining-shuts-down-amid-fatal-protests.html>.
- Singh, Amitoj. (2 May 2022). *India Includes Crypto Businesses in New Rules for Cyber Security*. CoinDesk. <https://www.coindesk.com/policy/2022/05/02/india-includes-crypto-businesses-in-new-rules-for-cyber-security/>.

- Singh, Amitoj. (23 December 2021). *India's Crypto Law Might Not Be Ready Before May, Sources Say*. CoinDesk. <https://www.coindesk.com/policy/2021/12/23/indias-crypto-law-might-not-be-ready-before-may-sources-say/>.
- Singh, Amitoj. (26 March 2022). *India Passes Stiff Crypto Tax Laws Despite Industry Uproar*. CoinDesk. <https://www.coindesk.com/policy/2022/03/25/indias-stiff-crypto-tax-legislation-becomes-law/>.
- Situmorang, Marshall and Putri, Audria. (11 February 2022). *Indonesia: Crypto Assets: General Legal Framework Of Crypto Assets And Current Development Of Non-Fungible Tokens (NFT) In Indonesia*. Mondaq. <https://www.mondaq.com/fin-tech/1160546/crypto-assets-general-legal-framework-of-crypto-assets-and-current-development-of-non-fungible-tokens-nft-in-indonesia>.
- Skadden, Arps, Slate, Meagher & Flom LLP. (3 November 2021). *China's New Data Security and Personal Information Protection Laws: What They Mean for Multinational Companies*. <https://www.skadden.com/Insights/Publications/2021/11/Chinas-New-Data-Security-and-Personal-Information-Protection-Laws>.
- Soto, Alonso. (26 February 2022). *ECB Urges Haste on Crypto Regulation in Wake of Russian Sanctions*. Bloomberg. <https://www.bloomberg.com/news/articles/2022-02-25/ecb-urges-haste-on-crypto-regulation-amid-russian-sanctions>.
- Stevens, Robert. (11 January 2022). *What Are Privacy Coins and Are They Legal?* CoinDesk. <https://www.coindesk.com/learn/what-are-privacy-coins-and-are-they-legal/>.
- Sulaiman, Stefano. (1 April 2022). *Indonesia to impose VAT, income tax on crypto assets from May*. Reuters. <https://www.reuters.com/business/finance/indonesia-impose-vat-income-tax-crypto-assets-may-2022-04-01/>.
- Sumsub. (1 February 2022). *Singapore's Digital Payment Token Regulations: Everything You Need to Know*. <https://sumsub.com/blog/new-law-in-singapore/>.
- Sun, Zhiyuan. (29 October 2021). *Kazakhstan expects at least \$1.5B in economic activity from crypto mining within 5 years*. Cointelegraph. <https://cointelegraph.com/news/kazakhstan-expects-at-least-1-5b-in-economic-activity-from-crypto-mining-within-5-years>.
- Tan, Malcom. (19 October 2021). *How Singapore's crypto regulations are shaping its DeFi space*. Forkast. <https://forkast.news/singapore-crypto-regulations-shaping-defi/>.
- Tassev, Lubomir (10 February 2022). *Kazakhstan President Orders Government to Find All Miners and Raise Tax by April*. Bitcoin.com. <https://news.bitcoin.com/kazakhstan-president-orders-government-to-find-all-miners-and-raise-tax-by-april/>.
- Tassev, Lubomir. (13 February 2022). *Russian Regulators Find Common Ground – Bitcoin Can't Be Used for Payments*. Bitcoin.com. <https://news.bitcoin.com/russian/>.
- Tassev, Lubomir. (23 February 2022). *Kazakhstan Cracks Down on Illegal Mining, Busts 13 Crypto Farms*. Bitcoin.com. <https://news.bitcoin.com/kazakhstan-cracks-down-on-illegal-mining-busts-13-crypto-farms/>.

- Tassev, Lubomir. (29 October 2021). *Russia Considers Selling Power to Kazakhstan Amid Deficit Caused by Crypto Miners*. Bitcoin.com. <https://news.bitcoin.com/russia-considers-selling-power-to-kazakhstan-amid-deficit-caused-by-crypto-miners/>.
- Tassev, Lubomir. (3 February 2022). *Kazakhstan Extends Power Cuts for Cryptocurrency Miners*. Bitcoin.com. <https://news.bitcoin.com/kazakhstan-extends-power-cuts-for-cryptocurrency-miners/>.
- The Associated Press. (1 February 2022). *El Salvador angrily rejects IMF call to drop Bitcoin use*. ABC News. <https://abcnews.go.com/International/wireStory/el-salvador-angrily-rejects-imf-call-drop-bitcoin-82588223>.
- The Competition Commission (Hong Kong). (2022). *Competition & Anti-Competitive Practices*. https://www.compcomm.hk/en/practices/what_is_comp/overview.html.
- The Economist. (19 March 2022). *Sanctions-dodgers hoping to use crypto to evade detection are likely to be disappointed*. <https://www.economist.com/finance-and-economics/why-crypto-is-unlikely-to-be-useful-for-sanctions-dodgers/21808188>.
- The Financial Stability Board. (13 October 2020). *Regulation, Supervision and Oversight of “Global Stablecoin” Arrangements: Final Report and High-Level Recommendations*. <https://www.fsb.org/wp-content/uploads/P131020-3.pdf>
- The Law Society of England and Wales and Tech London Advocates Blockchain Legal and Regulatory Group. (2022). *Blockchain: legal and regulatory guidance*. (2nd ed.). <https://prdsitecore93.azureedge.net/-/media/files/topics/research/blockchain-legal-and-regulatory-guidance-second-edition-2022.pdf?rev=05e6855c881543a0b7b15a5a083bd828&hash=0DB718F58467B-6162B0A3CDD30D10E1D>.
- The National Assembly of Vietnam. (24 November 2015). *Civil Code (No. 91-2005-QH13)* https://www.economica.vn/Content/files/LAW%20%26%20REG/91_2015_QH13%20Civil%20Code.pdf.
- The United States Department of Justice. (8 February 2022). *Two Arrested for Alleged Conspiracy to Launder \$4.5 Billion in Stolen Cryptocurrency*. <https://www.justice.gov/opa/pr/two-arrested-alleged-conspiracy-launder-45-billion-stolen-cryptocurrency>.
- The United States Securities and Exchange Commission. (3 April 2019). *Framework for “Investment Contract” Analysis of Digital Assets*. <https://www.sec.gov/files/dlt-framework.pdf>.
- The World Bank. (31 March 2015). *Islamic Finance*. <https://www.worldbank.org/en/topic/financialsector/brief/islamic-finance>.
- The Prime Minister of the Socialist Republic of Vietnam. (15 June 2021). *Decision approving strategy for development of e-Government towards digital Government for 2021 - 2025 with orientations towards 2030 (No. 942/QĐ-TTg)*. <https://vanbanphapluat.co/decision-942-qd-ttg-2021-development-of-e-government-with-orientations-towards-2030>.

- Thienpreecha, Kobkit. (16 February 2022) *Thailand's SEC Opens Public Hearing Period On Digital Asset Advertising Rules*. Conventus Law. <https://conventuslaw.com/report/thailands-sec-opens-public-hearing-period-on/>.
- Tsuchiya, Yoichi and Hiramoto, Naoki. (2021.) 'How cryptocurrency is laundered: Case study of Coincheck hacking incident.' *Forensic Science International, Reports* (vol 4). <https://www.sciencedirect.com/science/article/pii/S2665910721000724>.
- United American Corporation v Bitmain Incorporated and others* (Case No. 1-18-cv-25106 (S.D. Fla.))
- US Treasury. (7 March 2022). *FinCEN Advises Increased Vigilance for Potential Russian Sanctions Evasion Attempts*. <https://www.fincen.gov/news/news-releases/fincen-advises-increased-vigilance-potential-russian-sanctions-evasion-attempts>.
- VietNamNet Global. (28 March 2022). *Vietnam prepares legal framework for virtual assets, virtual currency*. <https://vietnamnet.vn/en/vietnam-prepares-legal-framework-for-virtual-assets-virtual-currency-826055.html>.
- VOI English. (23 January 2022). *The Government Will Soon Present A Crypto Exchange To Encourage A Better Ecosystem*. <https://voi.id/en/technology/127034/the-government-will-soon-present-a-crypto-exchange-to-encourage-a-better-ecosystem>.
- Wong, Samantha. (26 October 2021). *The Potential and Pitfalls of Cryptocurrency*. Australian Institute of International Affairs. <https://www.internationalaffairs.org.au/australianoutlook/the-potential-and-pitfalls-of-cryptocurrency/>.
- Wu, Cynthia. (6 February 2022). *All eyes on Asia: Crypto's new chapter post-China*. Cointelegraph. <https://cointelegraph.com/news/all-eyes-on-asia-crypto-s-new-chapter-post-china>.
- XR Today. (10 January 2022). *Metaverse Meaning – What is this New World Everyone's Talking About?* <https://www.xrtoday.com/mixed-reality/metaverse-meaning/>.
- Yaffe-Bellany, David. (22 March 2022). *Bitcoin Miners Want to Recast Themselves as Eco-Friendly*. New York Times. <https://www.nytimes.com/2022/03/22/technology/bitcoin-miners-environment-crypto.html>.
- Young, Martin. (2 March 2022). *Billionaire admits he was wrong about Bitcoin as Citadel Securities looks to crypto markets*. Cointelegraph. <https://cointelegraph.com/news/billionaire-admits-he-was-wrong-about-bitcoin-as-citadel-looks-to-crypto-markets>.
- Young, Martin. (9 March 2021). *Southeast Asia's first Bitcoin fund launches to meet local institutional demand*. Cointelegraph. <https://cointelegraph.com/news/south-east-asia-s-first-bitcoin-fund-launches-to-meet-local-institutional-demand>.
- Zangpo, Thukten. (6 November 2021). *Remittance in 2020 contributed 4.82% to the GDP*. Kuensel. <https://kuenselonline.com/remittance-in-2020-contributed-4-82-to-the-gdp/>.
- Zaslavsky, Sergei. (9 January 2019). *Insight: Blockchain and Antitrust: How Counsel Can Mitigate Risk*. Bloomberg BNA. https://www.omm.com/omm_distribution/antitrust/Bloomberg_BNA_Blockchain_and_Antitrust.pdf.

Zhao, Wolfie. (13 September 2021). *Japanese Crypto Exchange Group Gets Legal Status to Self-Regulate*. CoinDesk. <https://www.coindesk.com/markets/2018/10/24/japanese-crypto-exchange-group-gets-legal-status-to-self-regulate/>.

Zimwara, Terence. (26 January 2022). *South Korean Lawmaker Says He Will Start Accepting Crypto Donations in the New Year*. Bitcoin.com. <https://news.bitcoin.com/south-korean-lawmaker-says-he-will-start-accepting-crypto-donations-in-new-year/>.

Ziter, Russin. (17 February 2022). *Vietnam, inward remittance, and the power of blockchain*. Lexology. <https://www.lexology.com/library/detail.aspx?g=f357b7b6-1a44-427f-9261-59e7acfe57e2>.