

CRYPTOCURRENCY–THE INTERNET "DOLLAR": COMPARATIVE ANALYSIS OF REGULATIONS ON CRYPTOCURRENCY BETWEEN INDONESIA, SINGAPORE, AND CHINA

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ABSTRACT

Nowadays, the development of digital money and the numerous benefits it provides has had a significant impact on many parts of life. However, it is undeniable that these advances carry a number of concerns as well. As a result, each country has a different perspective on regulating this digital money, particularly in terms of its benefits as a payment mechanism. The purpose of this study is to compare the regulation and legality of using digital money as a payment mechanism in Indonesia, Singapore, and China by employing the normative legal research. Digital money is not allowed to be utilized as a payment mechanism in Indonesia. On the other hand, digital money is regarded as an intangible asset that can be used as a payment method in Singapore. China, on the other hand, has outlawed the usage of digital money for both investment and payment. Each country has its own considerations, and there are various things that Indonesia may learn from Singapore and China's arrangements in order to maximize the benefits of digital money.

Keywords: digital money, cryptocurrencies, payment method, legal tender

INTISARI

Dewasa ini, perkembangan uang digital dengan berbagai manfaat yang ditawarkan telah mempengaruhi banyak aspek dalam kehidupan. Meski demikian, tidak dapat dimungkiri bahwa banyak resiko yang ikut timbul bersamaan dengan perkembangan tersebut. Maka dari itu, setiap negara memiliki pandangan yang berbeda dalam mengatur uang digital khususnya dalam manfaatnya sebagai metode pembayaran. Tulisan ini bertujuan untuk melaksanakan analisis komparatif terhadap pengaturan serta legalitas mengenai uang digital sebagai metode pembayaran di Indonesia, Singapura, dan Tiongkok. Adapun metode yang digunakan dalam penulisan ini adalah penelitian hukum normatif. Di Indonesia, uang digital dilarang untuk digunakan sebagai metode pembayaran. Sedangkan di Singapura, uang digital dianggap sebagai barang tidak berwujud yang dapat digunakan sebagai metode pembayaran. Di sisi lain, Tiongkok telah melarang penggunaan uang digital baik untuk investasi maupun sebagai metode pembayaran. Setiap negara memiliki pertimbangannya masing-masing dan dengan menilik pengaturan di Singapura serta Tiongkok, terdapat beberapa hal yang dapat dipelajari oleh Indonesia guna memaksimalkan manfaat yang ditawarkan oleh uang digital.

Kata kunci: uang digital, mata uang kripto, metode pembayaran, alat bayar sah

INTRODUCTION

The industry 4.0, internet of things, digitalization, financial technology, and block chain are quite popular these days. In fact, industry 4.0 may be defined as a stage in the industrial revolution that emphasizes connectivity, automation, real-time data, and even machine learning.¹ In essence, it can also be defined as a period in which technology advances rapidly, affecting various elements of life. This rapid development of technology throughout the world allows expert to create more and more discoveries – for instance, a different method of payment, digital money.²

Digital money has developed as a means of trade, a measure of worth, and a store of wealth in electronic form. Any method of payment that has a monetary equivalent but is stored entirely in digital form is referred to as digital money. It is utilized in the economic exchange of products and services in a globally linked world where the majority of people is urbanizing, and trade is becoming increasingly international. There are numerous advantages from the usage of digital money, including cheaper transaction costs, less chargebacks, faster cash reception than through traditional banking institutions, no inflation, and it will be more efficient for international transactions.³

An example of one of the most popular digital money is cryptocurrency. This cryptocurrency may be used as money, but it can also be used in a variety of other ways. It may be used for payments, wages, financial services, remittances, and even for donations. As a matter of fact, money and currency are two different things. The main distinction between money and currency is that money is purely numerical, it is just ethereal, but currency is physical which can be touched and smelled.⁴ Cryptocurrency may also be used in ways that traditional government-issued currency cannot, for instance, in addition to being a payment mechanism, cryptocurrencies, like gold and stocks, can be used for investment. Furthermore, there is widespread consensus that cryptocurrencies or digital currencies are going to have a crucial role in the future capital markets, with high returns on investment.⁵ Moreover, the market capitalization of cryptocurrencies is increasing from time to time.

However, there is still a debate going on regarding cryptocurrencies because it has numerous benefits but may also often used for criminal activities such as money laundering and even

¹ 'What Is Industry 4.0? | The Industrial Internet of Things' <<https://www.epicor.com/en-id/resource-center/articles/what-is-industry-4-0/>> accessed 23 May 2021.

² Dewa Ayu Fera Nitha and I Ketut Westra, 'Investasi Cryptocurrency Berdasarkan Peraturan Bappebti No. 5 Tahun 2019' (2020) 9 Jurnal Magister Hukum Udayana.

³ Mark DODGSON and others, 'Managing Digital Money: From the Editors' (2015) 58 Academy of Management Journal 325 <https://ink.library.smu.edu.sg/lkcsb_research> accessed 30 June 2021.

⁴ 'Money vs Currency' <<https://www.wallstreetmojo.com/money-vs-currency/>> accessed 30 August 2021.

⁵ Sushant Nagpal, 'Cryptocurrency: The Revolutionary Future Money' [2018] SSRN Electronic Journal <<http://dx.doi.org/10.2139/ssrn.3090813>>.

terrorism. Governments are still attempting to accommodate cryptocurrencies under current laws, create new laws, or prohibit its usage due to the lack of legal definitions, restrictions, and a central authority. Thus, every state has its own set of regulations in relation to cryptocurrencies. For instance, some country does not recognize cryptocurrencies at all, some recognize it as an investment, and some even recognize it as a payment method.

In Indonesia, cryptocurrencies are regulated under several regulations. Cryptocurrency is prohibited to be used to make payments in Indonesia. However, it can still be invested as a commodity subject. On the other hand, many in the industry refer to Singapore as a "Crypto Haven" as the legalization of cryptocurrencies has been deeply entrenched in a series of pieces of legislation in Singapore.⁶

China's relationship with cryptocurrency is both perplexing and interesting. It was once the world's leading Bitcoin miner and had the world's largest exchange by amount.⁷ However, China has recently announced that financial firms as well as payment providers in China is no longer allowed from offering any services involving cryptocurrencies such as the exchanges of cryptocurrencies. Actually, this is not China's first moves against crypto currency as it has shut down local cryptocurrency exchanges in 2017.⁸ However, as result of this reiteration, the crypto market has been down recently and even created speculation on the collapse of cryptocurrency.

As mentioned, each state has different perspective and consideration in regulating cryptocurrencies. However, it is important to dive deeper on the topic of cryptocurrencies as it may bring numerous benefits mainly on country's economy but may as well create huge disadvantages. Therefore, this paper would discuss mainly about the cryptocurrency as a payment method from the law perspective. However, this paper will focus more on answering two questions which are:

1. How is the use of cryptocurrency as a payment method regulated in Indonesia, Singapore, and China?
2. To what extent can the law of cryptocurrency from Singapore and China be adopted in Indonesia?

⁶ 'Singapore Cryptocurrency Regulations 2021 | Coinfirm' <<https://www.coinfirm.com/blog/singapore-cryptocurrency-regulations/>> accessed 8 May 2021.

⁷ 'A Quick History of Cryptocurrency in China - CryptoVantage' <<https://www.cryptovantage.com/guides/history-of-crypto-in-china/>> accessed 30 June 2021.

⁸ 'China Bans Financial, Payment Institutions from Cryptocurrency Business | Reuters' <<https://www.reuters.com/technology/chinese-financial-payment-bodies-barred-cryptocurrency-business-2021-05-18/>> accessed 30 June 2021.

METHODS

This study will employ normative legal research to explain the questions raised in the preceding part, which is process of finding legal norms, legal principles, and legal doctrines to address the legal challenges at hand.⁹ The approach used in this study is a comparative approach, which compares and contrasts the laws of one country with those of another.¹⁰

Furthermore, to resolve legal issues as well as to provide prescriptions, a research source is required. There are two types of data in these study sources such as primary data and secondary data in which primary data comprises of statutes and jurisprudence, while secondary data consists of books, journals, law dictionaries, and comments on court decisions.¹¹ As for the data used in this study are primary data such as cryptocurrency laws in Indonesia, Singapore, and China as well as secondary data such as books, journals, and articles obtained on the internet.

RESULTS AND DISCUSSION

1. Cryptocurrencies

Cryptocurrencies are a new digital form of money that differs from traditional payment systems in that it is not under the jurisdiction of a central authority and does not fall under the financial institution's monitoring system. Each cryptocurrency is maintained by a blockchain, which is a peer-to-peer network which ensures the cryptocurrencies are monitored via a digital wallet or through the activity of trading.¹² Cryptocurrencies were never supposed to be developed in the form that they are now. It all started with Satoshi Nakamoto and the now-famous Bitcoin. Bitcoin was created in 2008 and published in early 2009 by a by Satoshi Nakamoto in reaction to the worldwide economic crisis of 2008, which was the worst in decades, if not centuries.¹³

Nakamoto's first intention was to develop a simple electronic peer-to-peer payment mechanism. People had been attempting to develop an online digital cash system for a long time, but they had always failed owing to centralization difficulties. However, in 2009 Nakamoto is finally able to create the first decentralized type of digital currency with no central governing or regulating

⁹ Theresia Anita Christiani, 'Normative and Empirical Research Methods: Their Usefulness and Relevance in the Study of Law as an Object' (2016) 219 *Procedia - Social and Behavioral Sciences* 201.

¹⁰ Peter Mahmud Marzuki, *Penelitian Hukum* (13th edn, PRANAMEDIA GROUP 2017) <<https://play.google.com/books/reader?id=CKZADwAAQBAJ&pg=GBS.PA173>> accessed 30 June 2021.

¹¹ *Ibid.*

¹² Dr Agnes Mutiso and Brian Maguru, 'AN ASSESSMENT OF THE ADOPTION OF CRYPTOCURRENCY AS A MODE OF PAYMENT BY SMES IN KIAMBU COUNTY, KENYA' (2020) 5 *International Journal of Social Science and Economic Research* 2000.

¹³ Quinn Dupont, *Cryptocurrencies and Blockchains* (Polity Press 2019) <<https://bookshelf.vitalsource.com/#/books/9781509520275/first!/4/2/48/2/2@0:91.6>> accessed 30 June 2021.

authority, Bitcoin.¹⁴ First established in 2009, cryptocurrency market is now forecast to rise at a CAGR of 7.1 percent from USD 1.6 billion in 2021 to USD 2.2 billion in 2026¹⁵ and there are currently more than 10,000 different types of cryptocurrency.¹⁶ In addition, below is a log scale statistic of the market capitalization from April 2013 to May 2021.¹⁷

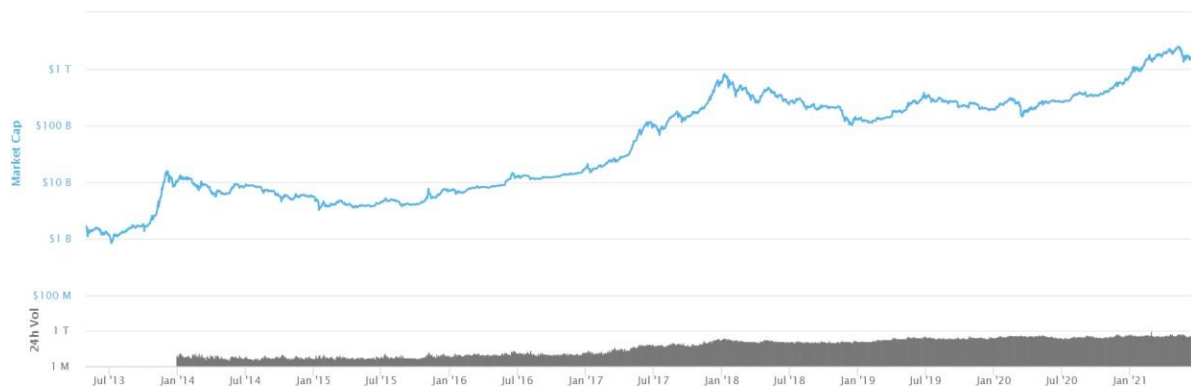


Figure 1. Log Scale Statistic of Market Capitalization from April 2013 to May 2021

As can be observed, the overall market capitalization has increased significantly from year to year. However, the crypto market is undeniably volatile, and it is now declining.

2 Advantages and Disadvantages of Cryptocurrencies

As previously said, cryptocurrencies offer several advantages, but they may also have drawbacks. Therefore, before diving deeper into the rules around cryptocurrencies as a payment method in Indonesia, Singapore, and China, it is crucial to understand the benefits and drawbacks of cryptocurrencies as a payment method and an investment. One of the most significant advantages of cryptocurrencies as a payment mechanism is that it allows individuals greater flexibility to organize shared activities, connect directly with one another, and govern themselves in a more reliable and decentralized manner. Second, it has lower inflation risk due to the lack of government control and intervention. Third, it provides help for the unbanked and underbanked-in Indonesia,

¹⁴ Krishna Kumar Thakur and Dr GG Banik, 'Cryptocurrency: Its Risks and Gains and The Way Ahead' (2018) 9 IOSR Journal of Economics and Finance.

¹⁵ 'The Cryptocurrency Market Size Is Expected to Grow from USD' <<https://www.globenewswire.com/news-release/2021/04/26/2216521/0/en/The-cryptocurrency-market-size-is-expected-to-grow-from-USD-1-6-billion-in-2021-to-USD-2-2-billion-by-2026-at-a-CAGR-of-7-1.html>> accessed 8 May 2021.

¹⁶ Davies On, 'A Short History of Cryptocurrencies' <<https://www.daviescoin.io/blog/a-short-history-of-cryptocurrencies>> accessed 23 May 2021.

¹⁷ Coin Market Cap, 'Global Cryptocurrency Market Charts' <<https://coinmarketcap.com/charts/>> accessed 30 June 2021.

for example, 51 percent of adults were unbanked or underbanked in March 2021.¹⁸ These people are unable to participate in the economic growth cycle because they lack access to savings and credit. Fourth, there is information transparency, with all completed transactions available to information but personal information concealed. It is also efficient because one can send money anywhere and it is simple to use.¹⁹

However, depending on one's perspective, the abovementioned benefits may also become drawbacks. For example, there is no financial foundation for cryptocurrency development because there is lack of government interference and central issuer.²⁰ Moreover, most cryptocurrencies' value fluctuates overtime, often drastically. For instance, Bitcoin price was at \$64,829 in mid-April then it plunged dramatically to \$30,000.151. This price decline is expected to occur as a result of China's reiteration on the banned of cryptocurrency. Many also predict that the price decline was partly triggered by Elon Musk's tweet saying that Tesla will no longer accept Bitcoin for vehicle sales owing to environmental concerns.²¹ Due to their high volatility, cryptocurrencies are frequently utilized for used laundering and other illegal financial operations.²²

Given the benefits and drawbacks of cryptocurrencies, it's logical that governments around the world will have differing opinions on how to regulate this digital currency. However, it is interesting when it comes to the regulation of cryptocurrencies in China and Singapore. As already mentioned, Singapore is renowned as a "crypto-haven", and the Singaporean government has declared that there are no compelling reasons to prohibit cryptocurrencies. In contrast, China's government has outright outlawed cryptocurrency, claiming that it is dangerous to its people and economy. Nonetheless, both countries are able to execute their regulations and profit from them. Therefore, by using Singapore and China as benchmarks, Indonesia may potentially benefit from their experiences in regulating cryptocurrencies.

3. Cryptocurrencies in Indonesia, Singapore, and China

3.1 Cryptocurrencies in Indonesia

¹⁸ Liputan6.com, '51 Persen Penduduk Dewasa Indonesia Masih Belum Punya Rekening Bank' <<https://www.liputan6.com/bisnis/read/4502172/51-persen-penduduk-dewasa-indonesia-masih-belum-punya-rekening-bank>> accessed 30 June 2021.

¹⁹ Carina-Elena Stegăroiu, 'THE ADVANTAGES AND DISADVANTAGES OF BITCOIN PAYMENTS IN THE NEW ECONOMY' (2018) 1 *Annals - Economy Series*.

²⁰ *Ibid.*

²¹ 'Bitcoin Falls Further as China Cracks down on Crypto-Currencies - BBC News' <<https://www.bbc.com/news/business-57169726>> accessed 30 August 2021; 'A Massive Crash in Cryptocurrency Prices Wiped out \$1 Trillion of Wealth, Reports Suggest' <<https://www.businessinsider.in/cryptocurrency/news/a-massive-crash-in-cryptocurrency-prices-wiped-out-1-trillion-of-wealth-reports-suggest/articleshow/82829155.cms>> accessed 30 August 2021.

²² Stegăroiu (n 19).

First established in 2009, cryptocurrency has grown in popularity in many countries, including Indonesia. Bitcoin, the world's first cryptocurrency, had a rough start in Indonesia. As mentioned, cryptocurrency is currently still prohibited as a means of payment by Bank of Indonesia, and the trade of bitcoin and other crypto assets as commodities was just permitted in February 2019. Nonetheless, cryptocurrencies are beginning to gain popularity in the country, particularly in 2020, as more people keep an open mind about new financial choices.²³

As a matter of fact, the number Indonesian crypto traders have grown 2,263% since 2015 and has reach a significant number in 2020 which is over 1,5 million traders.²⁴ In addition, according to a recent study by McKinsey & company, Indonesia has outpaced the rest of the world in terms of digital adoption with a score of 99% for the period of 2014-2017 outpacing India, South Korea, the United Kingdom, as well as the United States. Furthermore, based on the data obtained from PT Indodax, the crypto transaction in Indonesia Year to End (Q3 2020) reached Rp22.671 trillion.²⁵ The number of cryptocurrencies traders in Indonesia even peaked at 4.45 million in March 2021.²⁶ Being the world's fourth most populous country, Indonesia has the potential to join the open economy market in the near future by optimizing the utilization of cryptocurrencies.

3.1.1 Legal Framework

In Indonesia, cryptocurrencies are regulated by BAPPEBTI which stands for “*Badan Pengawas Perdagangan Berjangka Komoditi*” or Futures Exchange and Commodity Futures Trading Regulatory Agency. BAPPEBTI is an Indonesian agency that was established in 2005 to regulate some aspects of the financial services industry and is overseen by the Indonesian Ministry of Finance.²⁷ Even though there is currently no clear regulation on cryptocurrencies, Indonesia has several regulations on it such as the Futures Exchange and Commodity Futures Trading Regulatory Agency Regulation Number 5 of 2019 concerning the Technical Provisions for the Implementation of the Physical Crypto Asset Market in the Future Exchange (“**Reg. Number 5 of 2019**”), Futures Exchange and Commodity Futures Trading Regulatory Agency Regulation Number 7 of 2020 concerning Stipulation on List of Crypto Assets that May Be Traded in the Crypto Asset Physical Market (“**Reg. Number 7 of 2020**”) as well as the Ministry of Trade Regulation Number 99 of 2018 concerning the General Policy on the Implementation of Crypto Asset Futures Trading (“**Reg. Number 99 of 2018**”).

²³ Asosiasi Blockchain, ‘Indonesia Crypto Outlook Report’ (2020).

²⁴ *Ibid.*

²⁵ *Ibid.*

²⁶ Kiki Safitri, ‘Aset Kripto Berpeluang Tumbuh Subur Di Indonesia’ <<https://money.kompas.com/read/2021/06/17/194959726/aset-kripto-berpeluang-tumbuh-subur-di-indonesia>> accessed 2 July 2021.

²⁷ ‘BAPPEBTI Regulated Forex Brokers - A Guide to Trading in Indonesia’ <<https://www.forexbrokersreviews.com/bappebti-regulated/>> accessed 30 June 2021.

In Indonesia, cryptocurrencies are referred to as crypto assets according to Reg. Number 5 of 2019 particularly Article 1 paragraph 7. Pursuant to this article, it is known that cryptocurrencies are classified as intangible commodities. It is worth noting that the regulation refers to cryptocurrencies as a "crypto-asset," rather than a "legal tender",²⁸ because cryptocurrencies are only recognized as a commodity in Indonesia, where they may be traded in cash or through other derivatives. Moreover, since cryptocurrencies are not recognized as a legal tender, it cannot be used as to perform any legal transactions or contracts.

3.12 Cryptocurrencies as Payment Method in Indonesia

As already mentioned, in Indonesia, cryptocurrencies are not considered as legal tender. In addition, it is also illegal to be used as payment mechanism. Number of Indonesian regulations on cryptocurrencies appear to be cautious about whether cryptocurrencies can really contribute to the national financial stability and healthy economic growth or not. To be able to examine this issue further, it is necessary to have a basic understanding of Indonesian legal tender.

Pursuant to the first article of Regulation Number 7 of 2011 Concerning Currency (“**Currency Act 2011**”), the basic monetary unit and the only official legal tender in Indonesia is the rupiah. This implies that using crypto money is illegal and may result in sanctions for breaking the law. In addition, according to Article 33 of the Currency Act 2011, anybody who does not utilize the Rupiah in any transactions particularly on the territory of Indonesia are subject to criminal sanctions such as a maximum of one year in prison as well as a fine of maximum 200 million Rupiah.

As a matter of fact, cryptocurrencies are also classified as virtual currencies pursuant to the Article 34 of Bank Indonesia Regulation Number 18/40/PBI/2016 regarding Provision of Payment Transaction Processing (“**Reg. Number 18/40/PBI/2016**”). According to the article, it is illegal for any payment system service provider that conducts any transaction involving virtual currencies or cryptocurrencies. Furthermore, any payment system service providers that violate this item may face administrative consequences, ranging from a warning to the termination of their license.

In addition, similar definition of virtual currency is also provided under the Bank Indonesia Regulation Number 19/12/PBI/2017 on the Provision of Financial Technology (“**Reg. Number 19/12/PBI/2017**”). Article 8 paragraph 1 letter d of Reg. Number 19/12/PBI/2017 clearly states that every financial technology provider is obliged to use Rupiah in any transactions done in Indonesia. Moreover, pursuant to Article 20 paragraph 2 of Reg. Number 19/12/PBI/2017,

²⁸ Anything recognized by law as a method of settling a public or private debt or meeting a financial obligation, such as tax payments, contracts, and legal fines or damages, is considered legal tender. Almost every country accepts the national currency as legal money; ‘Legal Tender Definition’ <<https://www.investopedia.com/terms/l/legal-tender.asp>> accessed 27 August 2021.

violation of Article 8 paragraph 1 letter d will lead to sanctions which includes warnings in a written form and/or being removed from Bank Indonesia's list of registered financial technology providers.

As can be seen, there are a strict set of regulations regarding the usage of cryptocurrencies as a payment mechanism in Indonesia. As a matter of fact, strict regulations also apply on any transactions done with payment method other than the Rupiah. For instance, there was a case where the Directorate of Special Economic Crimes detained someone called Zaim Saidi for violating Article 33 of the Currency Act 2011 by substituting Dinar and Dirham, silver and gold coins, for the Rupiah.²⁹ This concludes that Indonesia strictly prohibits the usage of cryptocurrencies or other virtual currency as payment method.

As a matter of fact, the Indonesian Ministry of Finance specifically on 22 of January 2018 issued a warning regarding the usage of cryptocurrencies or virtual money in Indonesia and even released a press statement titled "Warning Against the Use of Virtual Currency in Indonesia", stating that:³⁰

1. Due to the lack of formal basis, the Indonesian Ministry of Finance supports Bank Indonesia's stance of not accepting virtual currencies or cryptocurrencies as legitimate payment mechanism, thereby making it illegal to do so.
2. Due to the lack of government authority to oversee and monitor cryptocurrencies, it is vulnerable to illegal activity, money laundering, as well as terrorist financing.
3. Virtual currency's speculative nature has the potential to jeopardize financial system stability.

As a result, it may be argued that the absence of a legal foundation, the lack of government intervention, and the speculative character of cryptocurrencies are some of the primary reasons for their ban as a payment method in Indonesia. However, the government agencies in Indonesia, led by Bank Indonesia, are continuing their internal discussions on the best method to regulate the usage of cryptocurrencies in the country. One of the most recent plans are to create their very own digital currency or known as "Central Bank Digital Currency". It was announced in May 2021 as the Indonesian bank has shifted its emphasis to examining the advantages of digital currencies.³¹ In addition, in light of the growing popularity of cryptocurrency trading, there is also consideration

²⁹ 'Bareskrim Consider Suspending Detention of Muamalah Market Founder Zaim Saidi' <<https://voi.id/en/actual/32584/bareskrim-consider-suspending-detention-of-muamalah-market-founder-zaim-saidi>> accessed 30 June 2021.

³⁰ 'Virtual Currency Is Here, So How Is Indonesia Going to Regulate It?' <<https://www.ssek.com/id/blog-id/virtual-currency-is-here-so-how-is-indonesia-going-to-regulate-it/>> accessed 30 June 2021.

³¹ 'Indonesia Announces Plans for Central Bank Digital Currency - CoinGeek' <<https://coingeek.com/indonesia-announces-plans-for-central-bank-digital-currency/>> accessed 30 June 2021.

of taxing profits.³² Nevertheless, there are currently no draft rule has been issued yet, therefore it is still a wait-and-see situation. As for the Central Bank Digital Currency, Bank Indonesia claims that there are currently no urgent needs to create it. According to Erwin Haryono, the Executive Director of Communication Department of Bank Indonesia, every state has different urgency in the usage of digital currencies. In China, the domination of private owned digital currency is high. Moreover, the number of citizens holding cash money is low which then creates urgency for China to release its own digital currency. According to Erwin, the condition in China is in contrast with Indonesia, which is why, creating the central bank digital currency is still considered not urgent.³³ As for the Central Bank Digital Currency, Bank Indonesia claims that there are currently no urgent needs to create it.³⁴

32 Cryptocurrencies in Singapore

Singapore, a small island nation that has repeatedly voted as the best place to conduct business in the world, has recognized a tremendous increase in the number of enterprises embracing the blockchain technology and cryptocurrencies. Singapore's positive image is based on its free-market economy, investor-friendly policies, and high levels of education and internet usage.³⁵ As mentioned in the previous section, because the legality of cryptocurrencies has been thoroughly ingrained in a series of pieces of law in Singapore, many in the industry refer to it as a "Crypto Haven".³⁶ It is set to become the world's second jurisdiction to regulate virtual currencies such as bitcoins, following the United States.³⁷ In addition, Singapore is also home to several fast-growing blockchain and cryptocurrency start-ups, founders, and entrepreneurs, alongside New York, London, and Hong Kong.³⁸

As a matter of fact, all ASEAN nations allows cryptocurrency trade, with the exception of Singapore, which imposes a tax.³⁹ In addition, according to Infocomm Media Development

³² 'Indonesia Considers Levying Tax on Crypto Profits - CoinDesk' <<https://www.coindesk.com/indonesia-considers-levying-tax-on-crypto-trading>> accessed 30 June 2021.

³³ 'Bank Sentral Tiongkok Rilis Mata Uang Digital, Kapan BI Akan Menyusul? - Makro Katadata.co.id' <<https://katadata.co.id/muchamadnafi/finansial/60d614f76c91f/bank-sentral-tiongkok-rilis-mata-uang-digital-kapan-bi-akan-menyusul>> accessed 30 June 2021.

³⁴ *Ibid.*

³⁵ 'What Makes Singapore the Blockchain and Crypto Haven? – Tokens24' <<https://www.tokens24.com/exclusive/what-makes-singapore-the-blockchain-and-crypto-haven>> accessed 30 June 2021.

³⁶ 'Singapore Cryptocurrency Regulations 2021 | Coinfirm' (n 6).

³⁷ BBC News, 'Singapore Becomes the Second Country to Regulate Bitcoins' <<https://www.bbc.com/news/av/business-26572771>> accessed 30 June 2021.

³⁸ 'Singapore — the World's Crypto Haven?' <<https://medium.com/@tabul8tor/singapore-the-worlds-crypto-haven-8f30e3463c59>> accessed 30 June 2021.

³⁹ Hazmi Tri Laksono and Muhammad Fuadillah Nugraha, 'Cryptocurrency Fever: Should Southeast Asian Countries Cooperate on Facing Cryptocurrency Market?' [2018] Airlangga

Authority's Future of Services study, Singapore's blockchain sector has the potential to reach US\$272 million in 2022 and US\$2.6 billion by 2030, with a 32.5 percent compound annual growth rate.⁴⁰

321 Legal Framework

The Monetary Authority of Singapore or also known as the Singapore's central bank as well as integrated financial regulator, regulates the cryptocurrency business in the country. Singapore's Monetary Authority also works with the financial industry to assist the city-state develop as a dynamic international financial hub.⁴¹ At first – in 2017, the Monetary Authority of Singapore confirmed that it will only oversee the cryptocurrencies offer or issue if it falls under the definition of securities. However, after the enactment of Payment Services Act in 2019, the jurisdiction of the Monetary Authority of Singapore has expanded to include digital payment token services – commonly known as cryptocurrency dealing. That is why, cryptocurrencies industry is now regulated by the Monetary Authority of Singapore.⁴²

Moreover, the cryptocurrencies in Singapore are referred to as “Digital Payment Token” which is defined under the Payment Services Act as,

“Any digital representation of value (other than an excluded digital representation of value) that — (a) is expressed as a unit; (b) is not denominated in any currency, and is not pegged by its issuer to any currency; (c) is, or is intended to be, a medium of exchange accepted by the public, or a section of the public, as payment for goods or services or for the discharge of a debt; (d) can be transferred, stored or traded electronically; and (e) satisfies such other characteristics as the Authority may prescribe”

The Payment Services Act regulates the purchase, sale, and exchange of digital payment tokens like cryptocurrencies. The Monetary Authority of Singapore also released a new Guide to Digital Token Offerings in May 2020. Article 2 of the Guide to Digital Token Offerings states that the Securities and Futures Act (SFA) also applies to cryptocurrency public offerings and issues. Moreover, in May 2020, the Singapore Monetary Authority also issued a revised guidance on digital token offers.⁴³ Cryptocurrencies are, nevertheless, subject to additional laws in Singapore

Conference on International Relations
<<https://www.express.co.uk/finance/city/902517/ISIS>> accessed 30 June 2021.

⁴⁰ Singapore Blockchain Ecosystem 2019, ‘Driving towards a Decentralized World: A Glimpse into Singapore’s Vibrant and Diverse Blockchain Landscape’ (2019).

⁴¹ ‘Who We Are’ <<https://www.mas.gov.sg/who-we-are>> accessed 30 June 2021.

⁴² ‘Regulatory Approaches to Cryptoassets: Singapore’ <<https://www.loc.gov/law/help/cryptoassets/singapore.php>>.

⁴³ Kruthi Venkatesh and Anirudh Rasatogi, ‘Cryptocurrency Regulation in Singapore: Challenges and Opportunities Ahead - Technology - Singapore’ <<https://www.mondaq.com/fin-tech/1025630/cryptocurrency-regulation-in-singapore-challenges-and-opportunities-ahead>> accessed 30 June 2021.

such as Singapore Notice on Prevention of Money Laundering and Countering the Financing of Terrorism (“AML/CFT”). According to the Monetary Authority of Singapore Guide, in the case where someone who acts as an intermediary perform any activities involving digital tokens that are security, the AML/CFT is applicable, this is regulated under the guidance Notice PSN02 - Prevention of Money Laundering and Countering the Financing of Terrorism – Digital Payment Token Service.

Due to the anonymous and borderless nature of the transactions of cryptocurrencies, the Singapore Monetary Authority has noted that digital payment token services “*carry substantial money laundering and terrorism funding issues or money-laundering/terrorism financing risks*”. Therefore, AML/CFT rules must be followed by all providers of digital payment token transactions or exchange services in Singapore.⁴⁴ Furthermore, the Inland Revenue Authority of Singapore (IRAS) has developed a tax guidance titled Income Tax Treatment of Digital Tokens, which means that in Singapore, cryptocurrencies are taxable.

322 Cryptocurrencies as Payment Method

Pursuant to the Income Tax Treatment of Digital Tokens, there are three types of digital tokens which are payment token, utility token, as well as security token. It is stated in the Income Tax Treatment of Digital Tokens that cryptocurrencies are classified as payment tokens since they can only be used as a payment mechanism. It means that cryptocurrencies can be used as payment method in Singapore. Cryptocurrencies, on the other hand, are not considered fiat currency because cryptocurrencies are not issued by a government and therefore are not legal tender. In addition, according to IRAS, cryptocurrency is seen as an intangible property. As a result, transactions involving the use of cryptocurrencies as a form of payment for products or services are considered as barter trade, and the value of the goods or services transferred should be assessed at the time of the transaction. Therefore, the value of the underlying commodities provided/services rendered would be taxed to the recipient of the cryptocurrencies.

However, since tax is a result of a commercial arrangement, and IRAS generally respects the form of the transaction, an analysis of the contractual agreement is required to compute the amount of taxable income from the receipt of cryptocurrencies. For instance, if a person or company advertises the worth of its goods or services in fiat money of \$100 and gets paid in equal cryptocurrency, its taxable income for the year will be \$ 100. On the other hand, if the person or company specifies the value of its goods or services in cryptocurrencies for instance 100 DOGE, the taxable income will be based on the value of 100 DOGE at the time of the transaction.

It can be said that Singapore's regulatory and legal framework for cryptocurrencies is well-balanced. Moreover, in 2018, Singapore's Deputy Prime Minister stated that the central bank was studying the potential danger presented by cryptocurrencies, however that there was no compelling reason to restrict cryptocurrency trading in the city-state at the time. Singapore has maintained its

⁴⁴ ‘Regulatory Approaches to Cryptoassets: Singapore’ (n 42).

view that an "informed public" is the greatest protection, with customers being taught to recognize red flags such as promises of rapid and large profits. Recently, a Singapore's national financial education program, even launched a campaign to increase awareness about the dangers of cryptocurrency and online trading investment frauds.⁴⁵

In conclusion, Singapore recognizes that cryptocurrencies are very volatile and carry significant risks. Despite this, Singapore acknowledges cryptocurrencies as a form of investment, but they are not recognized legal tender. Nonetheless, it is legal to use cryptocurrency as payment method in Singapore with barter trade system. In Singapore, cryptocurrencies are even taxable and subject to the AML/CFT.

33 Cryptocurrencies in China

China, like most other governments, took a "wait and see" attitude when bitcoin first established. In 2013, as the result of a surge in interest in Bitcoin in China, the price of Bitcoin increased 800% from in just two months. However, in early December 2013, the central bank of China along with other ministries issued a statement stating that the world's first cryptocurrency, bitcoin is no longer allowed to be used for products and services. However, at that time, it can still be sold and mined even if it has been designated unlawful tender. Furthermore, the majority of the world's biggest crypto exchanges are founded in China, meaning that China has a huge contribution in the development of cryptocurrencies industry. Moreover, in 2015, approximately 80 percent of the bitcoin transactions were matched against the Chinese-yuan. However, today, the number has dropped down to less than one percent. Chinese ICOs garnered more than \$400 million in September 2017, highlighting the high-risk nature of the deals. As a result, the Chinese government has outright prohibited initial coin offerings (ICOs). The Chinese government then completed its prohibition in early 2018 by tightening down on cryptocurrency exchanges and over-the-counter markets, then deploying its Great Firewall to restrict access to crypto exchanges and ICO websites outside of the nation.⁴⁶

In reality, China has yet to enact any regulation governing cryptocurrency. It is not accepted as legal tender or a form of payment. In addition, The Chinese banking system does not accept or provide services for any existing cryptocurrencies. However, as already mentioned, for the aim of investor safety and financial risk avoidance, number of Chinese central government authorities published ICO Rules which is an announcement concerning the prevention of financial risks from initial coin offerings. Pursuant to the ICO Rules, any ICOs that raise cash for cryptocurrencies are considered engaging in illegal public funding. In addition, the ICO Rules also place limits on cryptocurrency trading platforms' core business. It prohibits any ICOs platforms from converting

⁴⁵ Michelle Lim and Danny Park, 'How S. Korea and Singapore Are Grappling with Crypto Investor Protection' <<https://forkast.news/south-korea-singapore-crypto-investor-protection-asia/>> accessed 30 June 2021.

⁴⁶ CryptoVantage, 'A Quick History of Cryptocurrency in China' <<https://www.cryptovantage.com/guides/history-of-crypto-in-china/>> accessed 30 June 2021.

money to cryptocurrencies or vice versa. The activity of selling and buying cryptocurrencies are also strictly prohibited. Basically, any transactions involving cryptocurrencies are considered illegal. Therefore, if any platforms fail to comply to such regulations, they will be subject to several sanctions such as shut down of their websites and applications, removal of the apps from app stores, and even revocation of platforms' business licenses.

The main reason of this banned is due to the volatility of cryptocurrencies. Moreover, the European Central Bank has warned of a cryptocurrency bubble that has surpassed other financial booms, such as the 17th-century Tulip Mania. It should come as no surprise that Chinese authorities have limited cryptocurrencies in order to avert an economic shock if this bubble busts. They are aiming for stability and a financial architecture that is geared toward supporting rather than dominating the actual economy.⁴⁷

However, in response of this banned, China immediately considered on issuing their very own digital currency. As a matter of fact, in October 2017, the People's Bank of China is claimed to have completed trial runs on the algorithms needed for a digital currency supply. It even took approximately 4 years for China to set up an institute of digital money.⁴⁸ This new digital currency is anticipated to give China's government with a plethora of new capabilities for monitoring the economy and people of the states. By design, the digital yuan will eliminate one of cryptocurrencies' most appealing features which is user anonymity. This digital yuan is presently not accessible for trade and is still in its early phases of development. According to sources, the digital yuan has been trialed in four cities –Shenzhen, Suzhou, Chengdu, and Xiong'an–as well as several business organizations, including the taxi operator Didi Chuxing, since April 2020. In addition, it is also known that the earliest date to look for in terms of how the currency's trialing has made it suitable for commercial and perhaps wider, even worldwide use looks to be sometime in 2024 or 2025.⁴⁹

1. The Way Forward for Indonesia

Cryptocurrencies offer several advantages, as discussed in the preceding section. Indonesia, on the other hand, is well-known for its rapid cryptocurrency growth. Thus, it will be great if Indonesia could utilize the usage of cryptocurrencies, particularly to support the state economy. However, it cannot be denied that cryptocurrencies have significant disadvantages, which the Indonesian government is concerned about – such as the fact that they are frequently used for money

⁴⁷ Isabella Weber, 'Bitcoin: Why Did China Crack down on Crypto?' <<https://fortune.com/2021/05/21/china-ban-bitcoin-price-bubble-crypto/>> accessed 30 June 2021.

⁴⁸ 'Regulation of Cryptocurrency: China' <<https://www.loc.gov/law/help/cryptocurrency/china.php>>.

⁴⁹ 'When Can I Buy, Use, and Trade China's Digital Yuan?' <<https://www.china-briefing.com/news/when-can-i-buy-use-and-trade-chinas-digital-yuan/>> accessed 30 June 2021.

laundering and are extremely volatile. Nevertheless, it is known that Indonesia is considering additional regulation on cryptocurrencies, including the creation of its own digital currency as well as the imposition of tax on cryptocurrencies trade. The primary issue, however, is that the Indonesian government maintains that there are currently no urgent reasons to do so. As a result, it is still a wait-and-see situation.

As a matter of fact, even though it is not an easy task to do, based on Indonesia's cryptocurrencies market development as well as the ideas own by the government, Indonesia can create its own digital currency and impose tax on crypto trading. Furthermore, several other governments, such as China with its new digital yuan and Singapore with its regulation on cryptocurrency transaction tax, have already implemented the same ideas. Therefore, to a certain extent, both Singapore and China may be used as models for Indonesia's cryptocurrencies future development.

To begin with, when it comes to taxation of cryptocurrency trading, Indonesia is now concentrating on taxing the profit or capital gain made from cryptocurrency trading. Given the large amount of cryptocurrency traders in Indonesia, this is indeed a great idea. However, it is undeniable that the Singaporean regulations are, to some extent, reasonable to be applied in Indonesia. It is worth noting that cryptocurrencies are not considered as legal tender in Indonesia or Singapore. Nonetheless, Singapore has been able to take the opportunity to maximize the use of cryptocurrencies as a payment mechanism, despite the fact that it is not a legal tender. In Singapore, according to the IRAS, cryptocurrencies are considered as intangible assets. To be more specific, Indonesia also refers to cryptocurrency as intangible assets under Regulation Number 5 of 2019 Article 1 paragraph 7. Therefore, there are a high similarity between Indonesia and Singapore in regards of this issue.

Next, Singaporean law recognizes cryptocurrencies as a kind of barter exchange and enables them to be used as a payment mechanism. Thus, every transaction including the use of cryptocurrency as a payment mechanism is taxed. In addition, despite the fact that cryptocurrency is subject to income tax, Singapore is still regarded a crypto haven.

As a result, it is logical for Indonesia to emulate Singapore's successful economic approach. Moreover, it will be more profitable if Indonesia authorizes the use of cryptocurrencies as a payment mechanism in addition to charging tax on capital gains and earnings. As a result, it will be beneficial to the state's economy as well as the well-being of Indonesian residents, as cryptocurrencies provide numerous advantages.

However, given that one of the Indonesian government's worries is that cryptocurrencies are commonly used for money laundering, Singapore's policy of subjecting cryptocurrency transactions to AML/CFT can be utilized as a solution. The Regulation Number 8 of 2010 Concerning Money Laundering (“**Reg. Number 8 of 2010**”) governs the prevention of money laundering in Indonesia. Since cryptocurrencies are considered intangible assets, they may be subject to the Reg. Number 8 of 2010 if they are permitted to be used as payment methods.

Furthermore, the absence of government interference in cryptocurrency transactions is also a concern for the Indonesian government. In light of this issue, the Chinese government's approach of creating their own digital currencies should also be considered. Despite the fact that the Indonesian government has officially proclaimed this proposal, no actual action has yet been taken. One of the primary reasons, as previously stated, is that the Indonesian government believes there are presently no pressing reasons to do so. However, looking at what the Chinese government has done in recent years, it appears that preparing digital money takes a long time. Therefore, if the Indonesian government dismisses the current situation as unimportant and waits until it becomes critical, it will be too late. Therefore, there is no harm in starting to plan for the development of digital currency as soon as possible, as it has more advantages than disadvantages.

Finally, such regulations and approaches may be implemented by taking into account Indonesia's existing circumstances. This implies that the Indonesian government does not have to duplicate everything, but rather concentrate on what is thought vital and beneficial to the state. For instance, China has officially banned cryptocurrencies and created its own digital money. However, since cryptocurrencies provide various benefits, there is no need for a complete ban. In addition, since the national cryptocurrencies do not have anonymity, which makes it less attractive, there are several ideas that may be taken into considerations. For instance, by differentiating the tax regulation on national cryptocurrencies. Furthermore, in terms of taxation, Indonesia can modify the tax calculation based on the current scenario and existing law.

2. Conclusion

In conclusion, digital money, such as cryptocurrencies, has been rapidly evolving in recent years, influencing a wide range of aspects of life. Cryptocurrency regulations have already been enacted in number of states. Some allow cryptocurrencies investment, while others allow it to be used as a payment mechanism. Some governments, on the other hand, have opted to officially prohibit the usage of cryptocurrencies. Despite all the differences, each state has its own set of ideas and considerations when it comes to regulating the cryptocurrencies.

For example, Indonesia prohibits the use of cryptocurrencies as a payment mechanism due to their high volatility, frequent use for money laundering, and lack of government intervention. Singapore, on the other hand, recognizes cryptocurrencies as a payment method and has even imposed a tax on all cryptocurrency transactions. In contrast with Singapore and Indonesia, the Chinese government has officially banned all transactions involving cryptocurrencies and chose to create their own digital currencies in order to have more control over its economy and people. The Indonesian government, on the other hand, has lately announced plans to tax cryptocurrency transactions and create its own digital currency. When it comes to the growth of the Indonesian cryptocurrencies market, there is a good probability that Indonesia will profit more from maximizing the use of cryptocurrencies, particularly as a payment mechanism. However, the Indonesian government does not consider this a pressing issue, and as a result, no action has been taken.

Overall, Indonesia still has to examine a number of factors, such as the various advantages that cryptocurrencies provide. Understanding the advantages of cryptocurrencies may lead the Indonesian government to reconsider its position on allowing cryptocurrencies to be used as a payment mechanism. Furthermore, the number of cryptocurrency traders in Indonesia has been steadily rising indicating that there is a huge potency of maximizing the usage of cryptocurrencies. Learning from other states such as China and Singapore may be useful as well. By doing so, Indonesia will be able to maximize the use of cryptocurrencies.

REFERENCES

Primary Sources

Statutes and Statutory Instruments

Bank Indonesia Regulation Number 18/40/PBI/2016 regarding Provision of Payment Transaction Processing

Bank Indonesia Regulation Number 19/12/PBI/2017 on the Provision of Financial Technology

Futures Exchange and Commodity Futures Trading Regulatory Agency Regulation Number 5 of 2019 concerning the Technical Provisions for the Implementation of the Physical Crypto Asset Market in the Future Exchange Futures Exchange and Commodity

Futures Trading Regulatory Agency Regulation Number 7 of 2020 concerning Stipulation on List of Crypto Assets that May Be Traded in the Crypto Asset Physical Market

Income Tax Treatment of Digital Tokens

Initial Coin Offering Rules

Ministry of Trade Regulation Number 99 of 2018 concerning the General Policy on the Implementation of Crypto Asset Futures Trading

Payment Services Act of 2019

Regulation Number 7 of 2011 Concerning Currency

Singapore Notice on Prevention of Money Laundering and Countering the Financing of Terrorism

Secondary Sources

Books

Dupont Q, *Cryptocurrencies and Blockchains* (Polity Press 2019)
<<https://bookshelf.vitalsource.com/#/books/9781509520275/first!/4/2/48/2/2@0:91.6>>
accessed 30 June 2021.

Marzuki PM, *Penelitian Hukum* (13th edn, PRANAMEDIA GROUP 2017)
<<https://play.google.com/books/reader?id=CKZADwAAQBAJ&pg=GBS.PA173>>
accessed 30 June 2021.

Journal Articles

Christiani TA, 'Normative and Empirical Research Methods: Their Usefulness and Relevance in

the Study of Law as an Object' (2016) 219 Procedia - Social and Behavioral Sciences 201.

Mutiso DA and Maguru B, 'An Assessment of the Adoption of Cryptocurrency as a Mode of Payment by Smer in Kiambu County, Kenya' (2020) 5 International Journal of Social Science and Economic Research 2000.

Stegăroiu C-E, 'THE ADVANTAGES AND DISADVANTAGES OF BITCOIN PAYMENTS IN THE NEW ECONOMY' (2018) 1 Annals - Economy Series.

Thakur KK and Banik DGG, 'Cryptocurrency: Its Risks and Gains and The Way Ahead' (2018) 9 IOSR Journal of Economics and Finance Nagpal S, 'Cryptocurrency: The Revolutionary Future Money' [2018] SSRN Electronic Journal <<http://dx.doi.org/10.2139/ssrn.3090813>>.

Nitha DAF and Westra IK, 'Investasi Cryptocurrency Berdasarkan Peraturan Bappebti No. 5 Tahun 2019' (2020) 9 Jurnal Magister Hukum Udayana.

Online Journals

DODGSON M and others, 'Managing Digital Money: From the Editors' (2015) 58 Academy of Management Journal 325 <https://ink.library.smu.edu.sg/lkcsb_research> accessed 30 June 2021.

Laksono HT and Fuadillah Nugraha M, 'Cryptocurrency Fever: Should Southeast Asian Countries Cooperate on Facing Cryptocurrency Market?' [2018] Airlangga Conference on International Relations <<https://www.express.co.uk/finance/city/902517/ISIS->> accessed 30 June 2021.

Nagpal S, 'Cryptocurrency: The Revolutionary Future Money' [2018] SSRN Electronic Journal <http://dx.doi.org/10.2139/ssrn.3090813>.

Websites

'A Massive Crash in Cryptocurrency Prices Wiped out \$1 Trillion of Wealth, Reports Suggest' <<https://www.businessinsider.in/cryptocurrency/news/a-massive-crash-in-cryptocurrency-prices-wiped-out-1-trillion-of-wealth-reports-suggest/articleshow/82829155.cms>> accessed 30 August 2021.

'A Quick History of Cryptocurrency in China - CryptoVantage' <<https://www.cryptovantage.com/guides/history-of-crypto-in-china/>> accessed 30 June 2021.

Asosiasi Blockchain, 'Indonesia Crypto Outlook Report' (2020).

- ‘Bank Sentral Tiongkok Rilis Mata Uang Digital, Kapan BI Akan Menyusul? - Makro Katadata.Co.Id’ <<https://katadata.co.id/muchamadnafi/finansial/60d614f76c91f/bank-sentral-tiongkok-rilis-mata-uang-digital-kapan-bi-akan-menyusul>> accessed 30 June 2021.
- ‘BAPPEBTI Regulated Forex Brokers - A Guide to Trading in Indonesia’ <<https://www.forexbrokersreviews.com/bappebti-regulated/>> accessed 30 June 2021.
- ‘Bareskrim Consider Suspending Detention of Muamalah Market Founder Zaim Saidi’ <<https://voi.id/en/actual/32584/bareskrim-consider-suspending-detention-of-muamalah-market-founder-zaim-saidi>> accessed 30 June 2021.
- BBC News, ‘Singapore Becomes the Second Country to Regulate Bitcoins’ <<https://www.bbc.com/news/av/business-26572771>> accessed 30 June 2021.
- ‘Bitcoin Falls Further as China Cracks down on Crypto-Currencies - BBC News’ <<https://www.bbc.com/news/business-57169726>> accessed 30 August 2021.
- ‘China Bans Financial, Payment Institutions from Cryptocurrency Business | Reuters’ <<https://www.reuters.com/technology/chinese-financial-payment-bodies-barred-cryptocurrency-business-2021-05-18/>> accessed 30 June 2021.
- Coin Market Cap, ‘Global Cryptocurrency Market Charts’ <<https://coinmarketcap.com/charts/>> accessed 30 June 2021.
- CryptoVantage, ‘A Quick History of Cryptocurrency in China’ <<https://www.cryptovantage.com/guides/history-of-crypto-in-china/>> accessed 30 June 2021.
- ‘Indonesia Announces Plans for Central Bank Digital Currency - CoinGeek’ <<https://coingeek.com/indonesia-announces-plans-for-central-bank-digital-currency/>> accessed 30 June 2021.
- ‘Indonesia Considers Levying Tax on Crypto Profits - CoinDesk’ <<https://www.coindesk.com/indonesia-considers-levying-tax-on-crypto-trading>> accessed 30 June 2021.
- ‘Legal Tender Definition’ <<https://www.investopedia.com/terms/l/legal-tender.asp>> accessed 27 August 2021.
- Lim M and Park D, ‘How S. Korea and Singapore Are Grappling with Crypto Investor Protection’ <<https://forkast.news/south-korea-singapore-crypto-investor-protection-asia/>> accessed 30 June 2021.

- Liputan6.com, ‘51 Persen Penduduk Dewasa Indonesia Masih Belum Punya Rekening Bank’ <<https://www.liputan6.com/bisnis/read/4502172/51-persen-penduduk-dewasa-indonesia-masih-belum-punya-rekening-bank>> accessed 30 June 2021.
- ‘Money vs Currency’ <<https://www.wallstreetmojo.com/money-vs-currency/>> accessed 30 August 2021.
- On D, ‘A Short History of Cryptocurrencies’ <<https://www.daviescoin.io/blog/a-short-history-of-cryptocurrencies>> accessed 23 May 2021.
- ‘Regulation of Cryptocurrency: China’ <<https://www.loc.gov/law/help/cryptocurrency/china.php>>.
- ‘Regulatory Approaches to Cryptoassets: Singapore’ <<https://www.loc.gov/law/help/cryptoassets/singapore.php>>.
- Safitri K, ‘Aset Kripto Berpeluang Tumbuh Subur Di Indonesia’ <<https://money.kompas.com/read/2021/06/17/194959726/aset-kripto-berpeluang-tumbuh-subur-di-indonesia>> accessed 2 July 2021.
- ‘Singapore — the World’s Crypto Haven?’ <<https://medium.com/@tabul8tor/singapore-the-worlds-crypto-haven-8f30e3463c59>> accessed 30 June 2021.
- Singapore Blockchain Ecosystem 2019, ‘Driving towards a Decentralized World: A Glimpse into Singapore’s Vibrant and Diverse Blockchain Landscape’ (2019).
- ‘Singapore Cryptocurrency Regulations 2021 | Coinfirm’ <<https://www.coinfirm.com/blog/singapore-cryptocurrency-regulations/>> accessed 8 May 2021.
- ‘The Cryptocurrency Market Size Is Expected to Grow from USD’ <<https://www.globenewswire.com/news-release/2021/04/26/2216521/0/en/The-cryptocurrency-market-size-is-expected-to-grow-from-USD-1-6-billion-in-2021-to-USD-2-2-billion-by-2026-at-a-CAGR-of-7-1.html>> accessed 8 May 2021.
- Venkatesh K and Rasatogi A, ‘Cryptocurrency Regulation in Singapore: Challenges and Opportunities Ahead - Technology - Singapore’ <<https://www.mondaq.com/fin-tech/1025630/cryptocurrency-regulation-in-singapore-challenges-and-opportunities-ahead->> accessed 30 June 2021.
- ‘Virtual Currency Is Here, So How Is Indonesia Going to Regulate It?’ <<https://www.ssek.com/id/blog-id/virtual-currency-is-here-so-how-is-indonesia-going-to-regulate-it>> accessed 30 June 2021.

Weber I, ‘Bitcoin: Why Did China Crack down on Crypto?’ <<https://fortune.com/2021/05/21/china-ban-bitcoin-price-bubble-crypto/>> accessed 30 June 2021.

‘What Is Industry 4.0? | The Industrial Internet of Things’ <<https://www.epicor.com/en-id/resource-center/articles/what-is-industry-4-0/>> accessed 23 May 2021.

‘What Makes Singapore the Blockchain and Crypto Haven? – Tokens24’ <<https://www.tokens24.com/exclusive/what-makes-singapore-the-blockchain-and-crypto-haven>> accessed 30 June 2021.

‘When Can I Buy, Use, and Trade China’s Digital Yuan?’ <<https://www.china-briefing.com/news/when-can-i-buy-use-and-trade-chinas-digital-yuan/>> accessed 30 June 2021.

‘Who We Are’ <<https://www.mas.gov.sg/who-we-are>> accessed 30 June 2021.