ABSTRACT: This study is a literature review study aims to compare government policies towards Bitcoin as a digital currency. The government policies studied were the policies of the American, British, Japanese and Indonesian. The data collected were the data of legislation and the results of previous studies. The results of this study found that each country has different policies regarding digital currencies. In America and Singapore, digital currency is considered property and only applies to some circles and areas. Meanwhile, Japan and Indonesia have the similar policy in which prohibiting the use of digital currency as a means of payment. However, this policy is still under review. This study concludes that every country continues to use conventional money as the main means of payment, although it is possible that there will be policy changes in the future. Currently, each country has also conducted special studies on digital currency because there is the possibility of using digital currency for money laundering crimes.

Keywords: Bitcoin; Crypto; Digital Currency; Regulation

INTRODUCTION

As a result of financial technology improvement, cryptocurrency was developed to become "money" in the form of digital assets that can be used for trade or payment in the virtual world (Okhuese, 2017). Another way to think of cryptocurrency is as a system that employs encryption to enable distributed, decentralized digital currency exchange and transmission (Dourado and Brito, 2014). Cryptocurrency is a peer-to-peer network that can also transform into an internet protocol, a distributed public database (like blockchain), or a digital asset. According to various viewpoints, cryptocurrencies can be viewed as digital assets, a form of payment, a medium of trade, and other non-monetary applications (Everette et. al, 2017).

Based on research that has been carried out by experts, cryptocurrencies should be one of the entities that global anti-money laundering programs pay attention to. This is based on two reasons. First, anti-money laundering programs focus attention on suspicious (illegal) transactions. This focus seeks to combat the efforts of perpetrators to place the proceeds of illicit activities, such as corruption, tax evasion, terrorism financing, etc., into the legal financial system. Second, cryptocurrencies need to be a focus in global anti-money laundering programs
as they offer new ways of enabling near-real-time execution, verification and publication of transactions across political boundaries (Campbell-Verduyn, 2018). Cryptocurrencies also operate on a pseudonymous basis. In this case, the user's address cannot be associated with real-world identities. This is a challenge in implementing anti-money laundering programs. This is because pseudonymity is contrary to the essence of the anti-money laundering program, namely the application of Know Your Customer (KYC) principles. This principle is implemented with the aim of recognizing and owning customer data in the financial services sector (See et al., 2019). By knowing who the customer is, financial institutions such as banks can easily detect any suspicious transactions and associate them with an account. This is in stark contrast to the pseudonymity that bitcoin offers. Pseudonymity makes the user unrecognizable. At the same time, every bitcoin transaction is recorded on the blockchain. The entire transaction record is also visible to all users. Thus, in the bitcoin system, users cannot be identified, but transactions can be traced.

Digital currency has been widely used to support criminal acts such as terrorism from results of investigation. An example is the terrorist organizations in the Gaza Strip that fund their operations with cryptocurrencies. This is similar to the members and supporters of ISIS (Islamic State in Iraq and Syria) who specifically use cryptocurrencies in Indonesia and the United States (Goldman et al. 2017). In general, the reasons terrorist organizations use cryptocurrencies to conduct transactions are due to their anonymity, speed of transaction processing, decentralization, self-governance model, financial integrity, avoidance of taxes, enforcement of exchange control and capital flow management, ease of use, independent of the central financial system, and access to the dark web. In the context of anonymity, cryptocurrencies provide anonymity in the transaction. This concept is contrary to the principle of Know Your Customer (KYC) or Customer Due Diligence (CDD) which requires transaction reporting to comply with Anti-Money Laundering (AML) and Counter-Terrorist Financing (CFT) schemes. provides an additional anonymous service that combines transaction and location/identity masking.

PROBLEM

There have been a number of findings related to the financing of terrorism using bitcoin or other cryptocurrencies (Dion-Schwarz et al., 2019; Kfir, 2020; Ridwan, 2020; Wang & Zhu, 2021). Some of the findings can be summarized as follows:

Table 1. Use of Bitcoin in Terrorism Activities

<table>
<thead>
<tr>
<th>Year</th>
<th>Terrorist Organization</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Islamic State of Iraq and Syria (ISIS)</td>
<td>ISIS announced that it is raising funds through cryptocurrencies.</td>
</tr>
<tr>
<td>Year</td>
<td>Organization</td>
<td>Action/Statement</td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>2015</td>
<td>Islamic State of Iraq and Syria (ISIS)</td>
<td>Abu Mustafa, a fundraiser for ISIS, stated that since US law enforcement has closed their traditional financial transaction channels, the next option for transactions is the dark web using cryptocurrencies. Before his account was closed, Abu Mustafa managed to get five bitcoins for 1,000 dollars US.</td>
</tr>
<tr>
<td>2015</td>
<td>Islamic State of Iraq and Syria (ISIS)</td>
<td>Shukri Amin, a 17-year-old youth, is accused of promoting e-donations to support ISIS through social media and cryptocurrencies. He is also accused of supporting ISIS by teaching how to use bitcoin to fund terrorist organizations.</td>
</tr>
<tr>
<td>2016</td>
<td>Dewan Syuro Mujahidin</td>
<td>Released a fundraiser called Jahezona on Twitter and Telegram. The release comes with a price list, such as rockets, rifles, grenades, and other military equipment. They also attached a bitcoin QR code in the announcement.</td>
</tr>
<tr>
<td>2017</td>
<td>Akhbar al Muslimeen (website pro-Islamic Country)</td>
<td>This website publishes bitcoin addresses for donations. This website also regularly releases news about ISIS attacks and propaganda.</td>
</tr>
<tr>
<td>2017</td>
<td>Al-Qaeda and al Sadaqah</td>
<td>The two organizations are accused of using Facebook and Telegram to campaign for their funding through bitcoin.</td>
</tr>
<tr>
<td>2017</td>
<td>Islamic State of Iraq and Suriah (ISIS)</td>
<td>A woman has been detained in New York on charges of obtaining $62,000 worth of bitcoins to support ISIS operations.</td>
</tr>
<tr>
<td>2017</td>
<td>Zoobia Shahnaz</td>
<td>Zoobia Shahnaz, a 27-year-old Long Island resident is accused of sending more than $150,000 to multiple people where she is also accused of fraud involving money laundering and bank fraud, including Chase Bank, TD Bank, American Express and Discover by obtaining six credit cards. He also bought Bitcoin worth 62,703 US dollars and converted it into cash. That same year, he tried to leave the United States and live in Syria by obtaining a Pakistani passport. He transferred bitcoins through several bitcoin accounts and sent them to Pakistan, China and Turkey.</td>
</tr>
<tr>
<td>2017</td>
<td>Dark Web ISIS</td>
<td>ISIS’s dark web named Isdarat is proven to exist and raise funds after being accessed through The Onion Router (ToR) private line.</td>
</tr>
</tbody>
</table>
Hamas released a video showing that it encourages its supporters to use cryptocurrencies, particularly bitcoin, if they want to provide financial support. Hamas started fundraising via bitcoin since January 2019 and has earned thousands of US dollars.

Seeing the potential for misuse of cryptocurrencies for criminal activities, each country has begun to evaluate the presence of digital currencies by making certain regulations. This regulation is considered important considering the increasing public interest in the presence of digital currency. This research specifically identifies regulations regarding cryptocurrencies in major countries and also including Indonesia through a literature study.

FINDINGS AND DISCUSSION

Bitcoin Regulation in America
The US Senate Committee on Homeland Security announced plans to look into bitcoin regulation in 2013. The Internal Revenue Service (IRS), or the organization in America with the authority to manage taxes, formally declared virtual money to be property in 2014 (Thiemann, 2021). As a result, any gain or loss on the transaction will be taxed. These regulations are contained in the United States Treasury Department, Notice 2014-21, 2014. The IRS is aware that virtual currencies are also used to pay for certain goods and/or services, or are treated as investments (Moore, 2019). Virtual currency is a digital representation of a value that functions as a medium of exchange, unit of value, and/or store of value (Slattery, 2014). In certain circumstances, virtual currencies are operated like currencies in general (for example: coins and banknotes of the United States and/or other countries that are designed as legal currencies, circulated, and specifically used and accepted as payment intermediaries by countries but not as legal currency in any jurisdiction (Emmert, 2022). For the purposes of tax law, virtual currency is treated as property. Tax provisions generally apply to all transactions made with this virtual currency.

Any exchange and management of virtual currencies must abide by the Bank Secrecy Act (BSA), Title III of the PATRIOT Act, and be registered as a Money Services Business (MSB), according to a 2013 notification from the Financial Criminal Enforcement Network (Hazlett & Luther, 2020). This rule is designed to stop anyone from using virtual currency improperly to launder money, finance illegal operations, or evade taxes (Holman & Stettner, 2018). Additionally, according to the law, FinCEN acknowledges bitcoin as a form of currency in some areas but one that lacks some of the characteristics of the US dollar. Although the BSA has been implemented and compliance is required, virtual currency is still being used for illegal activities (Coelho et al., 2021). This is because it has a decentralized system and offers
pseudonymity. The Government Accountability Office (GAO) highlighted that in order to combat these crimes, it is necessary for conducting international cooperation.

The Securities and Exchange Commission (SEC) has also proposed regulation of virtual currencies being used as securities and preventing illegal activities involving securities through virtual currencies (Dibrova, 2016). The regulation further stipulates that virtual currency is the same as money, so investing money (including virtual currency) in tokens in the hope of profiting from the managerial efforts of others is considered a security issue (Middlebrook et al., 2014). Thus, it must be arranged in such a way. On July 23, 2013, the SEC indicted Shavers for engaging in a Ponzi scheme to defraud investors through his company, Bitcoin Savings and Trust (BTCST). Through BTCST, Shavers requests and accepts all investments and pays all intended returns in the form of the virtual currency, bitcoin. Shavers's actions turned out to meet the definition of an investment contract. Because it is a security crime, the courts have absolute jurisdiction over the case through the Securities Act. Cases of virtual currencies like Shavers forced the US government to establish a “uniform cryptocurrency law”. The proposed regulations will regulate licensing requirements, reciprocity, consumer protection, cybersecurity, anti-money laundering and licensing of license holders plus sanctions (Caliskan, 2022). Table 2 summarizes the regulation of cryptocurrency in USA.

### Table 2. Bitcoin Regulation in USA

<table>
<thead>
<tr>
<th>Institution</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Revenue Service (IRS)</td>
<td>Virtual currency is property so any gain or loss on its exchange will be taxed</td>
</tr>
<tr>
<td>Financial Criminal Enforcement Network (FinCEN)</td>
<td>Bitcoin is a medium of exchange that operates like currency in certain communities, but lacks all the attributes of the official currency of the United States</td>
</tr>
<tr>
<td>The Securities and Exchange Commission (SEC)</td>
<td>Virtual currency is a security so it requires particular regulation</td>
</tr>
</tbody>
</table>

### Bitcoin Regulation in Singapore

Virtual currencies were previously rejected as legal money by the Singaporean government. This is so because the virtual currency does not adhere to the security requirements set forth in the country's current Securities and Futures Act. But in 2014, the Monetary Authority of Singapore (MAS) enacted a policy to control the usage of bitcoin in Singapore after seeing the impact of virtual currencies on economic development (Lam, 2014). According to MAS, regulating bitcoin is important to prevent potential illicit activity including money laundering and the funding of terrorism. The target aspect of MAS regulation is the virtual currency intermediary in Singapore. MAS also urges users and entrepreneurs to keep an eye on the risks that may occur in transactions. On August 1, 2017, MAS released the following statement:

> “The offer or issue of digital tokens in Singapore will be regulated by MAS if the digital token is a product regulated under the Securities and Futures Act [Chapter 289] (SFA). . . MAS has observed that the function of digital
tokens has evolved beyond just being a virtual currency. For example, digital tokens may represent ownership or security interest in the assets or property of the issuer. The tokens can therefore be considered as offerings of shares or units in a collective investment scheme under the SFA. Digital tokens can also represent debt held by the issuer and are considered debt securities under the SFA.”

The proposed payment regulatory framework was the subject of a second consultation that MAS started on November 21. A Consultation Paper on the Proposed Payment Services Bill was specifically published by the MAS. The Payment Services Bill (Bill) aims to standardize the regulation of payment services under one legislation, broaden the scope of regulated payment activities to embrace new technologies like virtual currency services, and adjust laws in keeping with the dangers posed by these activities. The bill seeks to improve the ability of systems and organizations to collaborate across a wider range of payment activities, empower MAS to regulate payment services for risks of money laundering and terrorism financing, strengthen consumer and merchant fund protections, and set standards for technology risk management (Amboro & Christi, 2019).

It is believed that the Singaporean government does not forbid the possession of bitcoin and other cryptocurrencies according to the regulations (Latimer & Duffy, 2019). Furthermore, the Singaporean government does not forbid buying, selling, or acquiring bitcoin in any way, even through mining (Lim, 2015). Singapore does not yet require an operating license for bitcoin exchanges. Users have only been warned by the government thus far about the dangers of engaging in these bitcoin transactions. Additionally, according to the rule, virtual payment methods will be regarded as service providers and as such, will be subject to the Goods and Services Tax (GST) . Singapore has had tax laws governing bitcoin from the beginning of 2014. According to the aforementioned rules, it is clear that bitcoin can be used as a form of payment in the business world and that this use is then liable to tax on revenue received or earned in Singapore. According to Singaporean tax regulations, a GST or 7% transaction tax on the profits of any physical commodities sold over the internet and produced in Singapore must be paid. Therefore, if we spend $100 USD to buy bitcoins, we will pay $107 USD after tax due to the 7% tax rate. The regulation of Bit Coin in Singapore is summarized in Table 3.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monetary Authority of Singapore (MAS)</td>
<td>Establish standards for technology risk management, strengthen protection for consumer and merchant funds, regulate payment services to address risks of money laundering and terrorism financing, and improve systems' and organizations' capacity for collaboration across a wider range of payment-related activities.</td>
</tr>
</tbody>
</table>
Inland Revenue Authority of Singapore (IRS) | Bitcoin and other virtual currencies are considered service providers to be subject to the Goods and Services Tax (GST).

**Bitcoin Regulation in Japan**

Mt. Gox filed for bankruptcy with the Japanese financial authorities in the early months of 2014. The biggest cryptocurrency exchange, which conducts up to 80% of all bitcoin trades globally, recently lost 850,000 bitcoins worth 500 million US dollars (Decker & Wattenhofer, 2014). The Japanese government is paying closer attention as a result of this cybercrime case. There needs to be a new, more comprehensive arrangement. Jiro Aichi, Japan's deputy finance minister, spoke to the media on the Mt. Gox on February 27, 2014. Aichi made a remark addressing the government's involvement in the matter during the news conference. There is no law in Japan at the time the Mt. Gox issue arises that governs cryptocurrencies (Ishikawa, 2017). This makes managing the Mt. Gox case challenging. Therefore, it is necessary for the government to have the authority to make regulations.

The Financial Service Agency (FSA) oversees the legalization of virtual currencies. The primary responsibility of this organization, which falls under the Ministry of Financial Services, is to oversee Japanese financial rules (Shirakawa & Korwatanasakul, 2019). The FSA's regulation of cryptocurrencies is driven by two strategies from the National Security Strategy, namely a strategy for enhancing cyber security and a strategy for Japan's economic growth. Security and economy are thus two crucial elements of such a plan. The exchange platform was given a deadline of October 24, 2018, by the Japanese government through the FSA, an organization that regulates transactions involving virtual currencies. This commercial organization will be given self-regulatory status and will be in charge of all Japanese exchange platforms.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Service Agency (FSA)</td>
<td>Amendments to the Payment Services Act (PSA)</td>
</tr>
<tr>
<td></td>
<td>1. Companies that run a virtual currency exchange service business are required to apply the Know Your Customer (KYC) principle.</td>
</tr>
<tr>
<td></td>
<td>2. The company must register by including the name of the applicant for registration, the type of virtual currency managed, to the virtual currency exchange service facility.</td>
</tr>
<tr>
<td></td>
<td>3. The company is obliged to ensure security in the management of information</td>
</tr>
<tr>
<td></td>
<td>4. Establish a Japan Virtual Currency Exchange Association (JVCEA). Its purpose is to regulate and provide sanctions in case of violations in the virtual currency exchange.</td>
</tr>
</tbody>
</table>
Bitcoin Regulation in Indonesia

Regulation of bitcoin and other cryptocurrencies in Indonesia has undergone several developments. The initial arrangements were of course issued by Bank Indonesia (BI) as an institution that has a role related to financial regulation in Indonesia. In 2014, BI released Bank Indonesia Press Release No. 16/6/Dkom 2014 about bitcoin. BI expressly states that virtual currencies, including bitcoin, are not legal tender in Indonesia. In its provisions, BI refers to Law Number 7 of 2011 concerning Currency (Law No. 7 of 2011). Article 1 (1) of the Law explains that currency is money issued by the Indonesian government, hereinafter referred to as rupiah. In addition, BI also stated the obligation to use rupiah in every transaction in the territory of Indonesia. This provision is contained in Bank Indonesia Regulation Number 17/3/PBI/2015 concerning Obligation to Use Rupiah in the Territory of the Unitary State of the Republic of Indonesia (PBI No.17/3/PBI/2015). Article 2 (1) explains that each party is obliged to use rupiah in transactions conducted within the territory of Indonesia. The transactions referred to include a) every transaction that has a payment purpose, b) settlement of other obligations that must be met with money, and/or c) other financial transactions (Article 2 Paragraph 2). The obligation to use rupiah in transactions within the territory of Indonesia is also regulated in Article 21 (1) of Law No. 7 of 2011.

In addition to banning bitcoin as a means of payment, BI further warns all parties not to sell, buy, or trade virtual currencies (Chang, 2018). This is because based on BI's assessment, virtual currencies are very risky to financial system stability. The basis for this assessment is that there is no party officially responsible for the sustainability of the virtual currency system (Widjaja, 2019). The absence of this official authority makes virtual currencies full of speculation. The trading value also becomes very volatile so it is vulnerable to the risk of bubbles. At the same time, the anonymity promised by virtual currencies is vulnerable to being exploited for crimes of money laundering and terrorism financing. Bank Indonesia also prohibits all payment system service providers from processing payment transactions with virtual currency. In this provision, BI refers to PBI 18/40/PBI/2016 concerning the Implementation of Payment Transaction Processing and PBI 19/12/PBI/2017 concerning the Implementation of Financial Technology. Article 34 (a) PBI 18/40/PBI/2016 explains that payment system service providers are prohibited from processing payment transactions using virtual currencies. If the provisions of Article 34 (a) are violated, the sanctions that will be received are a) a warning, b) a fine, c) temporary suspension of part or all of the payment system service activities, and/or d) revocation of license as a payment system service provider (Article 35). In line with that, PBI 19/12/PBI/2017 contains a prohibition for financial technology business operators to use virtual currency in their payment system activities (Article 8 Paragraph 2).

Amalia (2019) explained that virtual currency also cannot be identified as a means of non-cash payment or electronic money (electronic money / e-money). The explanation is based on Article 1 (3) of PBI No. 11/12/PBI/2009 concerning Electronic Money (Electronic Money) which mentions the elements of electronic money. One of these elements is that the value of electronic money is stored electronically in a medium such as a server or chip. This is different from virtual currency which is stored electronically in the form of cryptography. Such properties are beyond the scope of e-money (Amalia 2019). Based on the Minister of Trade
Regulation No. 99 of 2018, specifically Article 2, the Regulation of the Commodity Futures Trading Supervisory Agency Number 5 of 2019 was made regarding Technical Provisions for the Implementation of the Physical Crypto Asset Market on the Futures Exchange. In this regulation, the definition of a crypto asset is increasingly emphasized, namely an intangible commodity in the form of digital assets, using cryptography, peer-to-peer networks, and distributed ledgers, to regulate the creation of new units, verify transactions, and secure transactions without interference, the hands of the other party (Article 1 Paragraph 7). Furthermore, in CoFTRA Regulation No. 7 of 2020 concerning the List of Crypto Assets Traded in the Physical Crypto Asset Market, there are 229 types of crypto assets that can be traded, one of which is bitcoin. With the enactment of this regulation, it is understood that the position of crypto currency in Indonesia is 1) not a legal tender in transactions and 2) a commodity that can be traded on the futures exchange.

**CONCLUSION**

Bitcoin regulations in the United States are regulated by several institutions, namely the Internal Revenue Service (IRS), Financial Criminal Enforcement Network (FinCEN), and The Securities and Exchange Commission (SEC). The IRS states that bitcoin and virtual currencies are property so their exchanges are taxed. FinCEN recognizes bitcoin as a means of exchange that is recognized by certain communities only, but does not have all the attributes of an official United States currency. Finally, the SEC considers virtual currencies to be securities where it requires such regulation. In Singapore, bitcoin can be used as a means of payment and subject to the Goods and Services Tax (GST). These regulations are enforced by the Inland Revenue Authority of Singapore (IRS).

At the same time, the Monetary Authority of Singapore (MAS) focuses on regulations to prevent virtual currencies from being used for money laundering and terrorism financing. MAS also seeks to strengthen consumer and merchant protection, establish technology risk management standards, and enhance organizational systems cooperation. Regulation in Japan focuses on the country's security and economy. The occurrence of the case of Mt. Gox made the Japanese government strengthen the application of the Know Your Customer principle to virtual currency businesses. Japan has also formed business associations to tighten supervision of virtual currency business activities. Indonesia itself prohibits the use of bitcoin and other virtual currencies as a means of payment. However, over time, bitcoin and others were recognized as tradable commodities on futures exchanges.

At first glance, regulations in Indonesia are not much different from regulations in Japan. Both are focused on strengthening the principle of customer recognition to prevent crime using bitcoin and other virtual currencies. In its development, Indonesia is also reportedly preparing a taxation scheme for trading crypto assets. However, like other countries, Indonesia still faces challenges regarding the pseudonymity and decentralization of Bitcoin. These two aspects will continue to complicate criminal liability related to Bitcoin. Because as long as it applies pseudonymity and decentralization, law enforcement can only trace every bitcoin transaction,
but cannot reveal the identity behind the transaction. Therefore, in the context of criminal liability, an understanding of the appropriate pseudonymity tracking method is needed.

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