



ANTI-MONEY LAUNDERING ENFORCEMENT FOR CRYPTOCURRENCY: A SYSTEMATIC LITERATURE REVIEW

**Indah Hartantiningrum¹, Eva achjani Zulfa², Chairul Muriman Setyabudi³, Ahmad
Ibrahim Badry⁴**

^{1,2,3,4} Graduate School of Sustainable Development, Universitas Indonesia, Indonesia.

Email: indahbareskrimpolri@gmail.com¹, evazulfa@ui.ac.id², cak_iir1966@yahoo.com³, aim.badry@gmail.com⁴

Abstract: The rapid growth of cryptocurrency and blockchain technology has transformed digital financial transactions by enabling decentralized, borderless, and efficient value transfers. Despite these advantages, cryptocurrencies have also created new opportunities for money laundering due to their pseudonymous nature, cross-border accessibility, and limited regulatory oversight. This study aims to examine strategies for optimizing anti-money laundering (AML) enforcement in cryptocurrency transactions through a systematic review of existing literature and an analysis of the Indonesian regulatory framework. A Systematic Literature Review (SLR) based on the PRISMA approach was employed to analyze 30 studies published between 2015 and 2024 from major academic databases. The findings indicate that effective AML enforcement requires an integrated framework consisting of harmonized regulations, mandatory Know Your Customer (KYC) and AML compliance, blockchain forensic technologies, transaction monitoring systems, and international cooperation among regulators and law enforcement agencies. The review further reveals that fragmented regulations and inconsistent implementation across jurisdictions remain significant barriers to combating cryptocurrency-related money laundering. For Indonesia, strengthening the legal framework by expanding reporting obligations to digital asset service providers and improving regulatory coordination would enhance the effectiveness of AML enforcement. This study contributes to the growing literature by synthesizing current evidence on cryptocurrency regulation and providing policy recommendations to strengthen financial integrity and support the sustainable development of the digital asset ecosystem.

Keywords: Cryptocurrency; Anti-Money Laundering; Law Enforcement; Blockchain; Financial Regulation.

INTRODUCTION:

The development of the times is a natural thing in the life of humanity. This has an impact on the advances in human civilization. The development of the times has now entered the era of digitalization. Many kinds of human activities have migrated to the digital world. These developments can change people's lifestyles from conventional to modern ways in all fields, including politics, economy, society, culture, military, and consumptive technology (Handayani, 2020). In addition, the role of technology also affects the escalation of the development of civilization, whose development is increasing in various sectors with the industrial revolution.



The transition of human civilization has led some people to try to modify and develop electronic money systems, some of which are cryptocurrencies, crypto assets, and crypto assets. The development of civilization can be a challenge, but it can also provide opportunities for society. The way people view the use of digital assets, which are classified as assets, makes it easy to create, send, and receive digital assets only with an internet connection and a digital wallet. There is no need for intermediaries such as banks; policies like this make it easier for people in developing countries to participate in the digital economy. However, businesses and investments using cryptocurrencies or crypto assets have recently found flaws that allow them to be used as a medium that is safe enough to commit money laundering crimes. Cryptocurrency is a digital currency that uses blockchain technology to record, store, and secure transactions (Al-Tawil, 2023). Cryptocurrency is a digital currency that differs from traditional currencies in that it is not issued by a government financial authority (Guidara, 2022). This signifies a high likelihood of risks associated with increased finance, fraud, and financial crime. Therefore, the International Monetary Fund (IMF) has warned about the global risks posed by the growth of poorly regulated cryptocurrencies (Elliott, 2021). One of the crimes rampant with the development of today's changes is a crime in the economic field, one of which is the process of money laundering with the media of cryptocurrency digital assets. This is supported by a statement from PPATK, which revealed that money laundering through Crypto Digital Assets has reached 800 billion (CNBC, April 19, 2024). This figure shows that there are serious problems that have an impact on the economy in Indonesia that must be addressed immediately.

Money laundering is concealing the unauthorized origin of dirty money and making it appear legitimate from illicit sources (Le Khac et al., 2009). According to the FATF, a professional money launderer illegally launders money for a third party in exchange for financial compensation. Most illegal acts aim to make money for the person or group committing the crime. The Financial Action Task Force (FATF) seeks to provide standards and improve legal, regulatory, and operational measures to combat Money Laundering, terrorist financing, terrorist financing, and other threats that will affect the integrity of the international financial system. According to research results from (Tsuchiya & Hiramoto, 2021) on January 26, 2018, a cryptocurrency, New Economy Movement (NEM), worth 58 billion yen (\$530 million), was fraudulently accessed and then stolen from Coincheck Exchange, headquartered in Japan. This suggests that the money laundering was international and that individuals purchased the stolen NEM. These findings emphasize the need for cryptocurrency exchanges to verify the identity of new users when accounts are opened. This will certainly have a negative impact on the world economy, is considered a serious problem, and is being discussed in countries around the world (Syed Mustapha Nazri et al., 2019). Cryptocurrency (Bitcoin) is a fully decentralized digital currency based on blockchain technology. According to (Trozze et al., 2023), Fraud in the Decentralization Finance (DeFi) ecosystem is on the rise, with victims losing billions of dollars to DeFi fraud every year. DeFi is a decentralized financial system that enables financial transactions, such as loans, savings, or investments, without intermediaries such as banks or traditional financial institutions. All transactions are made through protocols and smart contracts that run on blockchain technology (Sruthi & Shijin, 2020).



In price and the large number of goods offered so that the opposite decreases in price. The use of cryptocurrency among the public encourages Bank Indonesia to urge cryptocurrency users to be wise and careful when using cryptocurrency. Because cryptocurrency does not have specific rules, digital currencies are not recognized as legal tender in Indonesia. The Commodity Futures Trading Supervisory Agency (BAPPEBTI) is synergized to assess cryptocurrency's relevance for economic development or business. Indeed, BAPPEBTI has declared cryptocurrency as a commodity subject in the futures trading exchange. If we talk about money, it can be seen that money has evolved from the past to the present. If money was originally only in physical form, then there is no money in digital form. With the development of technology at that time, there were various ways that people could save their assets, for example, by selling them to get digital currency as one of their investments.

The use of Binance Coin virtual currency can be classified as a money laundering offense if the digital currency comes from the proceeds of crime. The results of the criminal act in question are regulated in Article 2 of Law No. 8 of 2010 concerning the Prevention and Eradication of Criminal Acts of Laundering. The results of the circulation/sale of narcotics, such as Binance Coin, will be obtained as a result of the criminal act of selling narcotics, which then Binance Coin is processed in a financial transaction or a legal business investment. Before the ASABRI case, a similar case used digital currency as an object of money laundering, namely in the United States, involving a virtual money exchange service provider (Money Transmitting), namely "Liberty Reserve."

Where the criminals, through the money Transmitting service provider, convert their digital currency originating from the sale of Narcotics to conventional currency so that the money from the crime of narcotics trafficking, which was originally the proceeds of the crime, then eliminates the trace so that it is not visible that the money is the proceeds of crime. In other words, money laundering has occurred. In Article 5, paragraph (1) of Law Number 8/2010, it is stated that every person who receives or controls the placement, transfer, payment, grant, donation, entrustment, exchange, or use of assets that he knows or should be suspected of being the proceeds of a criminal offense as referred to in Article 2 paragraph 1 shall be punished with a maximum imprisonment of 5 years and a maximum fine of Rp 1,000,000,000.00.

If it is related to the use of Bitcoin virtual currency as a means of money laundering, receiving, or exchanging (Conversion) in this case is every person who gets Bitcoin in the form of donations, grants, and entrustments that he knows or reasonably suspects is the result/origin of a criminal offense as referred to in Article 2 paragraph (1) of Law Number 8 of 2010 concerning Prevention and Eradication of Money Laundering Crimes, as well as virtual money exchange service providers (Bitcoin Exchange Money Transmitting) that facilitate or provide payment services, transfers. And Exchange (conversion) of Virtual money (Bitcoin) which he knows or reasonably suspects is the result / origin of a criminal offense as referred to in Article 2 paragraph (1) of Law Number 8 of 2010 concerning Prevention and Eradication of Money Laundering Crimes, As well as virtual money exchange service providers (Bitcoin Exchange Money Transmitting) who facilitate or provide payment, transfer, and exchange services (conversion) of virtual money (Bitcoin) which



they know or reasonably suspect is the result / origin of a criminal offense as referred to in Article 2 paragraph (1) of Law Number 8 of 2010 Concerning the Prevention and Eradication of Money Laundering Criminal Acts, then in this case there has been an effort to place the assets of criminal proceeds (placement) and efforts to separate the proceeds of criminal acts from their sources (Layering) in order to hide or disguise the origin of the Bitcoin in the form of converting Assets / Assets from the proceeds of criminal acts, which originally the Bitcoin virtual currency was dirty money, then became clean money. Thus, there has been a criminal act of money laundering.

As the market value of cryptocurrencies grows, the lack of regulation and the risk of significant financial instability require serious work by all parties, including policy-making bodies, to investigate the effects of this phenomenon on global financial stability. The following section provides a brief overview of the systematic literature review and a synthesis of results from several literatures. This comprehensive review of the systematic literature review is expected to address the issue of money laundering, especially in the use of digital assets (cryptocurrency).

LITERATURE REVIEW:

A systematic literature review is the first step to understanding relevant concepts and conducting empirical research. Both narrative and systematic reviews help identify research gaps and develop research questions. Meanwhile, a systematic review includes the information obtained from the literature, the approach used, and how the literature was found. The importance of a systematic literature review (Cronin, 2011; Mallett et al., 2012) can be seen in the criteria used to judge whether to include or exclude a study from the review, thus reducing bias in article selection. Decentralized cryptocurrency systems have made the world's monetary system more dynamic, making it more vulnerable to abuse and threatening financial stability. Governments must adopt effective regulations to minimize the risks associated with this innovative payment system and maximize its potential benefits (Afzal, 2019).

Table 1. Summary of studies included in the literature review

No	Sources	Research Question	Research Method	Findings
1	Albrecht, Duffin, Hawkins, and Morales Rocha (2019)	How cryptocurrencies fit into the money laundering process, and how government regulations respond to it	The method used is a theoretical approach to analyzing the money laundering process, focusing on how cryptocurrencies are integrated into this process and the response of regulatory bodies and governments to this new form of currency.	Strengthen financial regulations to reduce crypto currency money laundering risks
2	Edwards, Hanley, Litan, and Weil (2019),	Policy response to reduce crypto currency	This article does not explicitly outline a specific method, as it is a statement reflecting the views of the Financial	Financial regulators are expected to collaborate to develop a coordinated



	Frick (2019), Silva Ramalho and Igreja Matos (2021)	transaction volume	Economists Roundtable on the need for better regulation for crypto assets.	international regulatory response to abuses in the cryptocurrency market.
3	Dupuis and Gleason (2021)	View Unauthorized use of cryptocurrencies using Kane's regulatory dialectic paradigm.	The methodology used in this article involves an analysis of key events and the availability of “fintech” crime-fighting tools, along with a literature review focusing on applying regulatory dialectics to innovations in existing cryptocurrency markets that make them attractive to money launderers.	The best alternative to fight the phenomenon of money laundering is to strengthen the legal framework.
4	Jacquez (2016), Bennett et al. (2021), El Maknouzi and Sadok (2021)	How can other financial institutions, consultants, thought leaders, researchers, accountants, and regulators help address cryptocurrency and blockchain issues?	This research utilizes methods of comparative analysis, case studies and examples, data collection and analysis, boundary assessment, regulatory review, and theoretical frameworks to investigate the complexities surrounding the use of cryptocurrencies in illicit activities and the challenges faced by law enforcement and regulatory agencies.	All stakeholders must work together to create appropriate and safe regulations for cryptocurrency transactions.
5	(Tsuchiya & Hiramoto, 2021)	How stolen NEM currency can be laundered into Bitcoin in crypto markets by investigating NEM and Bitcoin transactions.	This article's research method involves identifying the hackers' NEM addresses and estimating the balance of unsold NEM over time. This was achieved by tracking the amount of NEM at the hackers' addresses and aggregating these amounts daily to analyze how the stolen NEM was exchanged for other cryptocurrencies.	It requires coordinated efforts from international police forces, as seen in the case law of law enforcement authorities in Europe and the US. Since illegal activities in crypto markets are not limited to a single country, law enforcement authorities in different countries can



				investigate and apprehend such hackers and perpetrators.
6	(Burgess, 2024)	How cryptocurrency regulation in different countries has impacted on enhancing consumer protection and preventing financial crime	The method used in this article is a comparative analysis of domestic regulatory approaches to cryptocurrencies across different jurisdictions. It examines how different countries classify cryptocurrencies (as securities, commodities, or property) and evaluates the implications of these classifications for regulatory frameworks, particularly in relation to the Financial Action Task Force (FATF) guidelines.	The results show that there is a need for cohesion and harmonization between regulatory frameworks. This article recommends that some countries follow others through a jurisdictional approach to ensure clarity in cryptocurrency regulation. This is also in line with the EU and FATF approach towards harmonization between domestic regulatory frameworks.
7	(Al-Tawil, 2023)	How to analyze the emerging intersection of the cryptocurrency sector with anti-money laundering (AML) regulations and risk-based AML test systems managed by financial institutions.	This research uses high-level analytical methods to examine the intersection between the emerging cryptocurrency sector and anti-money laundering (AML) regulations and risk-based AML due diligence systems maintained by financial institutions (FIs).	The United Arab Emirates has a robust legal system that aims to support AML efforts while also supporting the widespread integration of crypto assets into business and government operations
8	(Ncube & Kabwe, 2023)	What is the current state of cryptocurrency money laundering regulation in South Africa	This article uses qualitative analytical methods to examine the regulatory landscape surrounding cryptocurrencies and their potential to combat money laundering in South Africa. The study analyzes existing regulations, actions taken by financial institutions,	Researchers argue that there is a lack of a comprehensive regulatory framework for cryptocurrencies in South Africa. Leaving the banking system open to potential abuse of



			and challenges posed by the decentralized nature of cryptocurrencies.	digital assets. The researcher suggests that regulators in South Africa should focus on three key areas that should be addressed in money laundering activities associated with cryptocurrencies. The first action that should be implemented is to identify and verify the identity of cryptocurrency traders and investors. Secondly, measures should be implemented to monitor the flow of cryptocurrency transactions and detect suspicious activities. Thirdly, the digital wallets of crypto users are supposed to be managed by South African banking institutions.
9	(Guidara, 2022)	How cryptocurrency impacts the phenomenon of money laundering	This study uses the partial least squares structural equation modeling (PLS-SEM) method to examine the potential causal effects of governance constructs based on the World Bank's Worldwide Governance Indicators.	The researcher suggests improving cryptocurrency laws and regulations by enforcing financial security standards and laws and monitoring compliance of individuals conducting transactions using cryptocurrencies.
10	(Prendi et al., 2023)	What is the role of cryptocurrency in facilitating money laundering and	This article uses a qualitative methodology, specifically a systematic literature review and qualitative interpretation, to	Money laundering has a terrible social impact on society. There is a need for



		identifying various methods and services of sending funds through various addresses or businesses by falsifying their origin using cryptocurrency	examine the role of cryptocurrencies in facilitating money laundering. This includes a comprehensive analysis of relevant scholarly publications from various databases, focusing on the methods and services used in money laundering through cryptocurrencies.	software that can recognize patterns in accounts suspected of money laundering.
11	(Isa et al., 2015)	How the risk of money laundering is viewed from the perspective of banks and regulators	This article uses a theoretical framework based on the Brunswick Lens Model to explore judgment and decision-making (JDM) in assessing money laundering risk in Malaysian banking institutions. The model helps to understand how cognitive abilities influence the identification of cues or red flags associated with money laundering	The interviews suggest that money laundering is a real risk in banking institutions and that there are competent personnel to assist with the problem. There is even a need for banking institutions to be equipped with both automated and manual risk management solutions (human expertise) in assessing money laundering risks. The support provided by compliance departments is also seen as complementary to the role played by monitoring officers in increasing compliance intensity in banking institutions.
12	van Wegberg et al., 2018)	How the analysis of crimes that occur in cyberspace can be laundered using the services offered by the illegal Web.	This research uses a disbursement experiment that includes five mixing services and five exchange services to test the usefulness and reputation of these services in a bitcoin money laundering strategy. The selection of services was based on criteria	Some services provide excellent, professional service, with competitive fees. Others turn out to be scammers, accepting bitcoins but not providing any feed back.



			such as functionality and fees, reviews, and general reputation in the context of laundering.	
13	(Fletcher et al., 2021)	How to classify Bitcoin as a technology and implement a bottom-up international regulatory framework to enable the international community to fight terrorist financing and money laundering more effectively	This research uses a broad framework to regulate Bitcoin as a technology, providing guidance and direction rather than specific details that can be applied in each context. This emphasizes the need for further research to identify specific mechanisms to detect and prevent illicit activities such as terrorist financing and money laundering.	Bitcoin should be classified as a technology with a financial component and regulated as part of the emerging FinTech industry. As such, regulation should be in the hands of private sector technology companies. The W3C, considering its membership and mission, is ready to take on the role.
14	(Dyntu & Dykyi, 2019)	Ways and means of using cryptocurrencies for money laundering, possibilities and limitations.	The methodology used in this article is based on a comprehensive study of the ways and means of using cryptocurrencies in the process of money laundering, emphasizing the relevance of this topic due to the challenges faced by law enforcement agencies in identifying criminals and the nature of crimes committed with cryptocurrencies.	The results revealed that cryptocurrencies are an easy tool to use for money laundering as they provide relative anonymity for the currency owner, insofar as they do not require any personal information about the user and their location.
15	(Silva & Mira da Silva, 2022)	How cryptocurrency regulation contributes and current challenges that need to be addressed in future studies	The methodology used in this article is systematic mapping, which is used to search, identify and select all relevant primary studies on cryptocurrency regulation.	The challenges of cryptocurrency regulation are cryptocurrency adoption, central bank digital currency regulation, accounting for cryptocurrencies, and risks for cryptocurrencies. This systematic mapping provides an overview of proposed solutions for regulating



				cryptocurrencies as well as other research challenges.
16	(Cumming et al., 2019)	How the importance of crypto asset class regulation and internal collaboration between government agencies and developers in the formation of an ecosystem that integrates investor protection and investment.	The review includes a literature review and empirical studies on the regulation and supervision of cryptocurrency markets and their impact on innovation and economic growth.	There are Enforcement issues with the existing regulatory framework and there is a greater need for collaboration between government agencies and developers in building an ecosystem that integrates investor protection and investment.
17	(Afzal, 2019)	How Pakistan's regulators are dealing with the growth of high-risk cryptocurrencies	The methods used in this research are literature review, case studies, regulatory analysis, exploration of technology applications, and discussion of risks and challenges. These methods collectively contribute to a comprehensive understanding of the complex landscape of cryptocurrencies and blockchain technology.	Organizations need to keep pace with the increased efficiency and productivity provided by highly sophisticated technologies. Regulators need to meet the technological challenges and take a proactive approach to utilizing complex modern technologies. Regulators in Pakistan need to understand how important technological breakthroughs are and join the global effort to regulate the riskier aspects of cryptocurrencies.
18	(Albrecht et al., 2019)	How the crypto money laundering process is analyzed, and how government regulatory bodies	The research method used in this article is a theoretical approach to discuss virtual currencies and their role in the money laundering process.	Cryptocurrencies eliminate the need for financial institution intermediaries and enable direct peer-to-peer financial



		are responding to this new form of currency.	The study analyzes how virtual currencies are integrated into the money laundering process and how regulators and governments are responding to this new form of currency.	transactions. Due to the anonymity introduced through blockchain, the lack of government regulation also makes cryptocurrency transactions free, thereby making cryptocurrency favored by illegal websites and other criminal networks.
19	(Kolachala et al., 2021)	What are the practical challenges in implementing and enforcing AML mechanisms in cryptocurrencies and payment networks	Experimental research methods were used to analyze the impact of various blacklisting policies and measure the impact of coin contamination on payment networks. The study also includes an assessment of existing anti-money laundering (AML) mechanisms and challenges in their implementation.	The findings in this article show that no single solution can, in isolation, address the issue of money laundering. The only practical solution is to build a holistic and effective AML mechanism for blockchain-based financial services from a policy and technical perspective. The former involves building, from scratch, a system that reflects and adheres to global and national AML regulatory guidelines, and the latter involves using techniques such as blacklisting and building transaction and user risk models.
20	(Silva Ramalho & Igreja Matos, 2021)	How does bitcoin work and how does it work its functional relevance for criminal investigations.	This article uses research techniques that focus on analyzing cryptocurrency transactions, including identifying and tracking transactions using an alphanumeric code called a transaction ID (TXID).	Bitcoin, as a decentralized digital currency, provides both opportunities and challenges in the context of criminal investigations. While its anonymity and



				privacy are often attractive to criminals, the transparent nature of blockchain can also provide investigators with tools to trace the flow of funds. Advanced blockchain forensic technology and cross-border cooperation are key in dealing with the challenges arising from using Bitcoin in cybercrime or other crimes.
21	(Yeung, 2019)	How do conventional laws generated and enforced by national legal systems (legal codes) and the internal rules of blockchain systems, which take the form of software code executable by cryptographic algorithms operating across distributed computing networks, interact?	This article uses an analytical approach to explain the mechanics of blockchain technology and its interaction with the traditional legal system. The author identifies three types of interactions between legal codes and norms as law and analyzes the challenges faced by lawmakers and law enforcement officials in responding to this distributed technology.	The results show that different classes of cases are likely to generate different types of dynamic interactions between blockchain codes and conventional legal systems, and critically scrutinize the normative foundations of emerging interactions.
22	(Kepeli & Zulhuda, 2019)	What is the overview of the legal and regulatory framework for cryptocurrencies with a particular focus on Malaysia and the threats it poses from an anti-money	The research utilized qualitative analytical methods, which included examining official reports from various governments, writings of government officials, experts, and scholars in journals and newspapers, as well as interviews to draw conclusions about the legal framework of digital currencies and the	The results suggest that there is a need for comprehensive international and national laws and regulations for the control and management of cryptocurrencies. In addition, the anti-money laundering legal framework



		laundrying perspective	challenges associated with money laundrying.	should be enhanced to address the new threats posed by cryptocurrencies.
23	(Buttigieg et al., 2019)	What is the framework for crypto-asset regulation in Malta, with a particular focus on anti-money laundrying and terrorism financing.	This article uses research techniques to analyze information from various reports, articles, websites and other sources. The authors also utilized their experience in this field by attending various meetings and conferences regarding crypto assets and AML/CFT regulations in Malta.	The results suggest that Malta's framework may be a model for the broader EU regime in this context. The researcher also put forward recommendations towards actions that can be taken at the EU level to address the threat of money laundrying and terrorism financing associated with crypto assets.
24	(Wardani et al., 2022)	How cryptocurrency is used as a modus operandi for money laundrying crimes and how the readiness of regulations in Indonesia, especially Law Number 8 Year 2010, in ensnaring perpetrators of money laundrying crimes with the modus operandi of cryptocurrency.	This research uses a normative juridical method with legal materials from literature studies and uses a statutory approach.	The result of this research is the use of crypto as a mode of money laundrying due to the peer-to-peer network, namely the absence of third parties overseeing crypto transactions, high user privacy, and transaction flexibility.
25	(Leuprecht et al., 2023)	How cryptocurrencies are being utilized for illicit purposes across the global financial system. And the effectiveness of	This research uses mixed methods to collect data from court cases and secondary sources, such as news articles, academic documents, and government reports. The overall method included data collection, variable analysis,	The study found that Bitcoin is common among cryptocurrency launderers, although most also use some form of alt-coin, and that the use of third-party currency



		conventional anti-money laundering (AML) policies and laws against the rise of crypto laundering, using Canada as a case study.	case study approach, hypothesis validation, theoretical framework, recognized limitations, and comparative analysis.	exchanges is a prevalent method for creating illicit funds and hiding the proceeds of crime. While law enforcement is increasing its monitoring and understanding of popular cryptocurrencies such as Bitcoin, alt-coins pose significant challenges for criminal intelligence.
26	(Shovkhalov & Idrisov, 2021)	How to analyze the economic and legal phenomena of cryptocurrencies, as well as their characteristics in the Islamic legal system.	This article uses a three-part interrelated research methodology. The first discusses the characteristics of cryptocurrencies as an economic category. Second, it analyzes the law. And third, an analysis of the Islamic (Sharia) perspective on the phenomenon.	In conclusion of the scientific research, the researcher highlights the following provisions. First, economically, at present, cryptocurrencies are a rather controversial financial instrument: on the one hand, they have great investment attractiveness, but on the other hand, they are prone to great volatility and are a slightly risky financial asset. Secondly, from a legal point of view, cryptocurrencies have not yet found consistent consolidation and further legal regulation in Russian legislation
27	(Kfir, 2020)	What cryptocurrencies can do to national security in relation to terrorism	The research methods applied were literature review, case studies, stakeholder analysis, examination of regulatory challenges, and empirical data	The results show that there is a lack of an international regulatory regime, including a definition



			and theoretical frameworks. These methods collectively contribute to a better understanding of the challenges posed by cryptocurrencies to national security, particularly in relation to crime and terrorism.	of what cryptocurrencies are and how one can regulate the sector. The study also seeks to encourage the international community to focus more on cryptocurrencies and develop an effective and binding regulatory regime.
28	(Teichmann & Falker, 2020)	How cryptocurrencies are used to launder money and how solutions from Liechtenstein's new blockchain law can be used to address the problem.	This article uses a three-part methodological approach: - Pre study - Main Study - Quantitative Study	Money launderers abusing cryptocurrencies such as Bitcoin as a means of financial crime may refer to the Liechtenstein Blockchain Act as a benchmark for regulators around the world aiming to solve this problem.
29	(Wronka, 2022)	What is the regulatory framework for cryptocurrencies in Germany, the UK and Switzerland with a focus on anti-money laundering (AML) laws. As well as the risks of cryptocurrencies and their benefits along with changes made to existing laws to regulate cryptocurrencies.	The research method used is qualitative by analyzing information for case studies and to examine available data and statistics.	The findings show that AML laws are also being modified to cover violations of cryptocurrency laws, as decentralized financial systems create opportunities for crime and terror financing. Moderate or lenient laws were found in Switzerland after Germany and the UK which have the most traditional and strict money laundering laws.
30	(Kim et al., 2021)	How to analyze the impact of an emerging type of	This article uses modelling approaches to analyze the impact of new anti-money	These findings suggest that cryptocurrency



		anti-money laundering regulation that requires cryptocurrency exchanges to report suspicious transactions to financial authorities.	laundrying (AML) regulations that require crypto exchanges to report suspicious transactions to financial authorities. These methods include modeling virtual currency exchange decisions and the portfolio selection problem of money launderers.	exchanges will exhibit clearer reporting behavior under regulation from private banks. Researchers attribute this result to the lower Money Laundering detection capabilities of cryptocurrency exchanges.
--	--	---	--	--

METHODOLOGY:

This research aims to analyze aspects related to the recovery of assets of money laundering losses from banking crimes through policies to be made. Through this analysis, it is expected to identify more clearly how this crime is detrimental to the financial system and society. The information gained from this research can serve as a solid foundation for policymakers, law enforcement, and relevant practitioners to design more effective strategies for dealing with this complex challenge. We used several literature search tools such as Scientdirect, Springer, Emerald, Publish or Perish, Taylor, and Francis to collect studies on the chosen topic. From several literature reviews, the research objectives resulted in three research questions to be studied in more depth:

1. What research methodology will be used?
2. How can financial institutions, consultants, leaders, auditors, researchers, accountants, and regulators help address the crypto asset issue?
3. What are the policies and forms of legal action in the settlement process against money laundering?

This study used a systematic literature review (SLR) approach that was created and followed, and it referred to recommended standards for reporting in systematic reviews. These recommendations have been widely supported and adopted, as evidenced by co-publication in several journals, such as the PRISMA statement regarding reporting complete systematic reviews.

Research questions are based on the needs of this research topic. The formulation of research questions that reveal the regulation of money laundering against digital banking assets, according to Wahono, 2016 focuses on five elements known as PICOC, namely:

1. Population (P), the target group for investigation (e.g., people, regulations, etc.)
2. Intervention (I) determines the aspect of the investigation or problem of interest to the researcher.
3. Comparison (C), the aspect of the investigation that will be compared with the intervention.
4. Outcomes (O), the effect of the intervention.
5. Context (C), the setting or environment of the investigation.



Table 2. PICOC Structure

PICOC: Optimizing Law Enforcement Against Money Laundering with Crimes of Banking Origin to Increase Public Trust	
Population	<i>Money laundering Practice</i>
Intervention	<i>Regulation of money laundering in all aspects</i>
Comparison	Regulation of money laundering between banking aspect and non-banking aspects
Outcomes	<i>Solution of money laundering</i>
Context	Optimizing law enforcement against money laundering

Source: Data processed in 2024

Search process or the process of finding the data needed in this study. Data obtained from the Elsevier website address with the help of the Publish or Perish (PoP) application or software to make it easier to find the journals needed. Then search for journals by entering the keywords “Money Laundering”, “Crypto Currency”, and “Finance Crime”. These input criteria and limitations are to determine whether or not the data is suitable for use in this study. The following criteria are feasible in this study:

1. Data used in the period 2019-2024
2. Data obtained from elsevier sources
3. The data used is only about optimizing law enforcement against money laundering.

Study selection is done through selection based on journals taken based on the problem of money laundering and the application of its regulations. The studies taken are journals related to money laundering. In addition to the theme, the number of studies screened is prioritized in journals uploaded in the last 5 years.

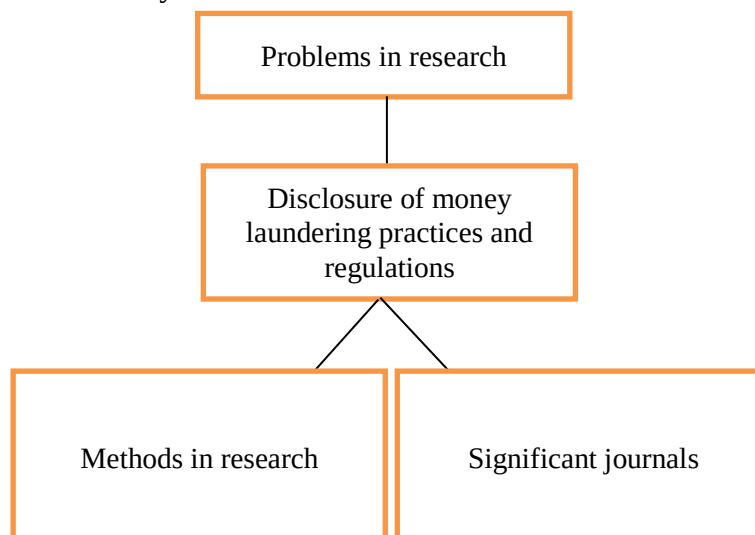


Figure 1. Thinking Map

Rating scales used to assess the quality of studies with meta-analyses that require statistical methods can be descriptive and/or inferential to summarize data from multiple studies on a



particular topic of interest. These techniques help generate knowledge from multiple studies, both qualitatively and quantitatively. The usual method has four basic steps: identification (defining the search string and type of database), screening (inclusion and exclusion of pre-defined literature and quality assessment criteria), synthesis (extracting and categorizing data), analysis (narrating the results), and finally, concluding.

RESULTS AND DISCUSSION:

How can financial institutions, consultants, leaders, auditors, researchers, accountants, and regulators help address the crypto asset problem?

Cooperation between financial institutions, advisors, management teams, auditors, researchers, accountants, and regulators is essential to addressing the challenges associated with cryptocurrencies. These roles each help create a safe, transparent, and innovative environment for the development of this technology. Since cryptocurrency transactions do not have an agency that oversees them, there must be clear regulations to protect cryptocurrency marketers. With the rapid growth of blockchain technology and the popularity of crypto assets, crypto money laundering is becoming an increasingly pressing issue. Virtual currencies offer great potential to revolutionize the global financial system due to their semi-anonymous and decentralized nature.

However, these characteristics also make them vulnerable to abuse by criminals, including laundering the proceeds of crime, tax evasion, and funding illegal activities. Clear and comprehensive regulations are needed to address these issues. Without strict regulation, the unsupervised use of cryptocurrencies can create opportunities for money laundering activities that are difficult to trace. Regulation is important to protect the integrity of the global financial system and maintain public confidence in blockchain technology and cryptocurrencies. A clear regulatory framework will ensure that all players in the cryptocurrency market, from exchanges to digital wallet providers, comply with strict KYC (Know Your Customer) and AML (Anti-Money Laundering) standards. This includes the obligation to identify and verify the identity of our users, report suspicious transactions, and cooperate with law enforcement authorities to investigate illegal activities.

In addition, strict regulation encourages responsible innovation in the field of cryptocurrencies. Companies wishing to operate in this market are encouraged to comply with regulations and develop technologies and practices that enhance the security and transparency of their transactions. Clear rules allow businesses to operate more securely and investors and consumers to use cryptocurrencies more safely. Given the cross-border nature of virtual currencies, it is also important to ensure that these regulations are applied consistently across jurisdictions. International cooperation between regulatory authorities is key to developing effective global standards to combat money laundering in cryptocurrencies.

Ultimately, clear regulation does not hinder the crypto industry's development but provides a foundation for healthy and sustainable growth. By protecting the cryptocurrency ecosystem from abuse, regulation will ensure that cryptocurrencies can reach their full potential as safe, transparent, and innovative instruments in the future financial system.



What is the settlement process policy for money laundering?

In the ever-evolving digital age, cryptocurrencies have become one of the biggest innovations in the global financial system. However, with the advent of this new technology, great challenges have also emerged, such as money laundering through cryptocurrencies. Cryptocurrency money laundering has become a major problem for governments and financial institutions worldwide, as cryptocurrencies are anonymous and difficult to trace. The process of solving cryptocurrency money laundering starts with the development of strict and comprehensive policies. Governments are working with financial regulators such as the Financial Action Task Force (FATF) to develop regulatory frameworks to detect and prevent money laundering through cryptocurrencies. This includes identifying suspicious transactions, requiring reporting to crypto service providers, and implementing anti-money laundering (AML) standards. The Financial Action Task Force (FATF) is a key player in the area of financial integrity, an area that has a high degree of international recognition and standardization (Mosna & Soana, 2023).

In addition to regulation, technological improvements and oversight play an important role in the fight against crypto-money laundering. Blockchain technology, on which cryptocurrencies are based, enables transparent and irreversible recording of transactions. However, the anonymity of cryptocurrencies remains a challenge. Therefore, governments and the private sector are working to develop advanced tools and algorithms to identify suspicious transaction patterns and link those transactions to real identities. Once the policies and technology are in place, the next step is strict enforcement. The government has imposed severe sanctions on virtual currency money launderers, including hefty fines and prison sentences.

Law enforcement agencies also have the authority to confiscate illegally obtained crypto assets. High-profile cases are often used as examples to demonstrate the government's seriousness in combating this crime and provide a deterrent to other criminals. The threat of crypto-money laundering is increasing, so existing policies must be constantly evaluated and adapted to the latest developments. Governments regularly review their policies and make necessary adjustments to ensure they remain effective in facing new challenges arising from cryptographic advancements.

What are the policies and forms of legal action in the settlement process against money laundering?

Making Special Rules Regarding the Use and Existence of Binance Coin Virtual Currency in Indonesia, seeing the users and enthusiasts of this digital currency increasing and the value of digital currency transactions in Indonesia, it is time for special rules to be made regarding the use and distribution of digital currencies, especially Binance Coin in Indonesia. If look at Article 21 paragraph (1) of Law No. 7 of 2011 concerning Currencies, it states that “Rupiah must be used in:

- a. Any transaction that has the purpose of payment
- b. Settlement of other obligations that must be fulfilled with money
- c. Other financial transactions conducted in the territory of the Unitary State of the Republic of Indonesia. and then article 33 paragraph (1) of Law Number 7 year of 2011 concerning Currency, that every person who does not use rupiah in:
- d. Every transaction that has a payment purpose:



- e. Settlement of the other obligations that must be fulfilled with money;and/or
- f. Other financial transactions as referred to in article 21 paragraph (1) shall be punished with a maximum imprisonment of 1 year and a maximum fine of Rp 200.000.000.00 (two hundred million rupiah)

This means that in every transaction that has the intention of using it for payment or other obligations that are required to use money or other financial transactions using Binance Coin digital currency when it is still in the territory of the Unitary State of the Republic of Indonesia, it can get a criminal sentence with a maximum imprisonment of 1 (one) year and a maximum fine of Rp. 200,000,000.00 (two hundred million rupiah). From the laws explained, it is clear that digital currencies cannot be used as legal tender in Indonesia. However, the Indonesian Financial Authority can take learning experiences related to what is done by the Internal Revenue Service (IRS or United States tax agency), which gives the term Digital currency as a property asset and is obliged to pay taxes, on the other hand, the results of Bitcoin mining are also given tax obligations as well Internal Revenue Service Service (IRS) has provided guidance related to taxes on transactions using digital currencies, namely Binance or similar currencies “IRC Notice 2014-21 About Enforcement Of Virtual Currency Takes” which are required for people and groups that use digital currencies. The IRS likens Binance Coin to a property investment, where the profits earned must be taxed and can also be compared to stock trading or mutual funds that must be reported.

CONCLUSIONS

This study set out to examine how law enforcement against money laundering committed through cryptocurrency digital assets of banking origin can be optimized to strengthen public trust, using a systematic literature review of thirty studies published between 2015 and 2024 alongside an analysis of Indonesian law. The review shows that the problem is not a shortage of research attention – existing studies already evaluate legal frameworks for cryptocurrency, the interaction between conventional law and blockchain’s internal “code as law,” and the regulation of cross-border payment systems vulnerable to hacking – but a shortage of settled, harmonized regulation that keeps pace with how quickly the technology and its criminal uses evolve.

In answer to the three research questions guiding this study, the findings can be summarized as follows. First, on methodology, the study combined a PRISMA-guided systematic literature review of thirty peer-reviewed sources with a doctrinal analysis of Indonesian anti-money laundering law. Second, financial institutions, regulators, auditors, and technology developers each play a distinct but complementary role in addressing the crypto-asset problem: institutions and exchanges sit at the front line of identity verification and suspicious-transaction reporting, regulators set the KYC and AML standards those actors must meet, and developers build the forensic tools – transaction tracing, blacklisting, risk modeling – that make enforcement of those standards possible. Third, the settlement process for cryptocurrency money laundering rests on three pillars: clear regulatory policy led by bodies such as the FATF, technological monitoring capable of linking pseudonymous transactions to real identities, and consistent legal enforcement, including asset seizure and criminal sanctions, backed by regulation that is reviewed and updated as the technology changes.



Some of the research results in the table above show that cryptocurrency money laundering will be easier if there is no clarity about regulation in the crypto money market. This freedom is a great opportunity for illegal web providers and a decline in the general public's trust in digital currencies. All parties involved, from governments to crypto companies and users, need to work together to build a safer, more transparent, and trustworthy environment for cryptocurrencies in the future. A combination of proper regulation and technological innovation is key to ensuring that digital currencies can function effectively without being abused by criminals.

Viewed through a comparative-law lens, elements of foreign legal frameworks can be identified and adapted for use in Indonesia. Indonesia can draw on what the US IRS does: the OJK need not treat Binance Coin as money for payment transactions, since Indonesian currency law already settles that question. Instead, the OJK should regulate Binance Coin digital currency from another angle – as a taxable asset, rather than merely as a means of exchange. Comparative rules from abroad can inform the drafting of Indonesian regulation. In addition, every exchange that sells digital currencies should be bound by Know Your Customer (KYC) principles, drawing on Bank Indonesia Regulation No. 3/10/PBI/2001 on the Implementation of the Know Your Customer Principle. In carrying out their business activities, digital currency service providers must:

- a. Establish a customer acceptance policy;
- b. Establish policies and procedures for identifying customers;
- c. Establish policies and procedures for monitoring customer accounts and transactions
- d. Establishing risk management policies and procedures relating to the application of the principle of knowing the customer

In addition, digital currency service providers should be required to report suspicious transaction activity related to money laundering. To date, Law No. 8 of 2010 on the Prevention and Eradication of Money Laundering has not been amended to reach the use of digital currencies such as Binance Coin as a means of laundering money. Reforming the law in this respect is part of a broader effort to update the legal substance underpinning law enforcement, so that enforcement can reach and affirm this new mode of laundering. Law Number 8 of 2010 concerning the Prevention and Eradication of Criminal Acts of Money Laundering should therefore be amended to cover the prevention and eradication of money laundering carried out through digital currency. The provision that should be revised is Article 17, paragraph (1), which could be expanded to include “providers of conventional money exchange services to digital currencies, and vice versa” as a reporting party. In that way, every digital currency service provider would carry a clear obligation to report, monitor compliance, and apply the Know Your Customer (KYC) principle under the amended law.



References:

- About - Financial Action Task Force (FATF) (2020) “[WWW document]”, available at: www.fatf-gafi.org/about/ (accessed 28 November 2018).
- Albrecht, C., Duffin, K. M., Hawkins, S., & Morales Rocha, V. M. (2019). The use of cryptocurrencies in the money laundering process. *Journal of Money Laundering Control*, 22(2), 210–216. <https://doi.org/10.1108/JMLC-12-2017-0074>
- Afzal, A. (2019). Cryptocurrencies, Blockchain and Regulation: A Review. *The Lahore Journal of Economics*, 24(1), 103–130. <https://doi.org/10.35536/lje.2019.v24.i1.a5>
- Al-Tawil, T. N. (2023). Anti-money laundering regulation of cryptocurrency: UAE and global approaches. *Journal of Money Laundering Control*, 26(6), 1150–1164. <https://doi.org/10.1108/JMLC-07-2022-0109>
- Albrecht, C., Duffin, K. M. K., Hawkins, S., & Morales Rocha, V. M. (2019). The use of cryptocurrencies in the money laundering process. *Journal of Money Laundering Control*, 22(2), 210–216. <https://doi.org/10.1108/JMLC-12-2017-0074>
- Burgess, T. (2024). A Multi-Jurisdictional Perspective: To What Extent can Cryptocurrency be Regulated? And if so, Who Should Regulate Cryptocurrency? *Journal of Economic Criminology*, 5(July), 100086. <https://doi.org/10.1016/j.jeconc.2024.100086>
- Buttigieg, C. P., Efthymiopoulos, C., Attard, A., & Cuyle, S. (2019). Anti-money laundering regulation of crypto assets in Europe’s smallest member state. *Law and Financial Markets Review*, 13(4), 211–227. <https://doi.org/10.1080/17521440.2019.1663996>
- CNBC. (2024). PPATK Ungkap Pencucian Uang Lewat Kripto Sebesar Rp 800 Miliar! <https://www.cnbcindonesia.com/news/20240419105454-4-531615/ppatk-ungkap-pencucian-uang-lewat-kripto-sebesar-rp-800-miliar#:~:text=PPATK%20Ungkap%20Pencucian%20Uang%20Lewat%20Kripto%20Sebesar%20Rp%20800%20Miliar!,-Rossono%20Aji%20Nugroho&text=Jakarta%2C%20CNBC%20Indonesia%20%2D%20Pusat%20Pelaporan,dengan%20mudah%2C%20sehingga%20sulit%20dilacak>
- Cumming, D. J., Johan, S., & Pant, A. (2019). Regulation of the Crypto-Economy: Managing Risks, Challenges, and Regulatory Uncertainty. *Journal of Risk and Financial Management*, 12(3). <https://doi.org/10.3390/jrfm12030126>
- Dyntu, V., & Dykyi, O. (2019). Cryptocurrency in the System of Money Laundering. *Baltic Journal of Economic Studies*, 4(5), 75. <https://doi.org/10.30525/2256-0742/2018-4-5-75-81>
- Fletcher, E., Larkin, C., & Corbet, S. (2021). Countering money laundering and terrorist financing: A case for bitcoin regulation. *Research in International Business and Finance*, 56(January), 101387. <https://doi.org/10.1016/j.ribaf.2021.101387>
- Guidara, A. (2022). Cryptocurrency and money laundering: A literature review. *Corporate Law and Governance Review*, 4(2), 36–41. <https://doi.org/10.22495/clgrv4i2p4>
- Isa, Y. M., Sanusi, Z. M., Haniff, M. N., & Barnes, P. A. (2015). Money Laundering Risk: From the Bankers’ and Regulators Perspectives. *Procedia Economics and Finance*, 28(April), 7–13. [https://doi.org/10.1016/s2212-5671\(15\)01075-8](https://doi.org/10.1016/s2212-5671(15)01075-8)
- Iswantoro, ‘Juridical Analysis of Environmental Law Enforcement in Forestry Crimes Regulation in the Regional Autonomy Iswantoro’, *Journal of Morality and Legal Culture (JMCL)*, 1.1 (2020), 45–49. <https://doi.org/10.20961/jmail.17i1.41087>
- Kepli, M. Y. B. Z., & Zulhuda, S. (2019). Cryptocurrencies and anti-money laundering laws: The need for an integrated approach. *Emerging Issues in Islamic Finance Law and Practice in Malaysia*, 247–263. <https://doi.org/10.1108/978-1-78973-545-120191020>
- Kfir, I. (2020). Cryptocurrencies, national security, crime and terrorism. *Comparative Strategy*, 39(2), 113–127. <https://doi.org/10.1080/01495933.2020.1718983>



- Kim, D., Bilgin, M. H., & Ryu, D. (2021). Are suspicious activity reporting requirements for cryptocurrency exchanges effective? *Financial Innovation*, 7(1). <https://doi.org/10.1186/s40854-021-00294-6>
- Kolachala, K., Simsek, E., Ababneh, M., & Vishwanathan, R. (2021). SoK: Money Laundering in Cryptocurrencies. *ACM International Conference Proceeding Series*. <https://doi.org/10.1145/3465481.3465774>
- Le Khac, N.-A., Markos, S., O'neill, M., Brabazon, A., & Kechadi, M.-T. (2009). An efficient Search Tool for an Anti-Money Laundering Application of an Multi-national Bank's Dataset. *Proceedings of the 2009 International Conference on Information & Knowledge Engineering*.
- Leuprecht, C., Jenkins, C., & Hamilton, R. (2023). Virtual money laundering: policy implications of the proliferation in the illicit use of cryptocurrency. *Journal of Financial Crime*, 30(4), 1036–1054. <https://doi.org/10.1108/JFC-07-2022-0161>
- Mosna, A., & Soana, G. (2023). NFTs and the virtual yet concrete art of money laundering. *Computer Law and Security Review*, 51(December 2021), 105874. <https://doi.org/10.1016/j.clsr.2023.105874>
- Ncube, P. T., & Kabwe, R. (2023). The regulation of cryptocurrencies to combat money laundering crimes in South African banking institutions. *De Jure*, 56(1), 354–375. <https://doi.org/10.17159/2225-7160/2023/v56a22>
- Prendi, L., Borakaj, D., & Prendi, K. (2023). the New Money Laundering Machine Through Cryptocurrency: Current and Future Public Governance Challenges. *Corporate Law and Governance Review*, 5(2), 84–91. <https://doi.org/10.22495/clgrv5i2p9>
- Sara Hersriavita, 'UPAYA PENGEMBALIAN KERUGIAN NEGARA DARI PERKARA TINDAK PIDANA KORUPSI OLEH KEJAKSAAN NEGERI SUKOHARJO', *Jurnal Hukum Dan Pembangunan Ekonomi*, 7.1 (2019), 15–28.
- Shovkhalov, S., & Idrisov, H. (2021). Economic and Legal Analysis of Cryptocurrency: Scientific Views from Russia and the Muslim World. *Laws*, 10(2), 1–17. <https://doi.org/10.3390/laws10020032>
- Silva, E. C., & Mira da Silva, M. (2022). Research contributions and challenges in DLT-based cryptocurrency regulation: a systematic mapping study. *Journal of Banking and Financial Technology*, 6(1), 63–82. <https://doi.org/10.1007/s42786-021-00037-2>
- Silva Ramalho, D., & Igreja Matos, N. (2021). What we do in the (digital) shadows: anti-money laundering regulation and a bitcoin-mixing criminal problem. *ERA Forum*, 22(3), 487–506. <https://doi.org/10.1007/s12027-021-00676-4>
- Solikah Ana Estikomah, 'Aspek Hukum Import Sampah Plastik', *Bestuur*, 7.2 (2019), 106. <https://doi.org/10.20961/bestuur.v7i2.40439>
- Sruthi, R., & Shijin, S. (2020). Investigating liquidity constraints as a channel of contagion: a regime switching approach. *Financial Innovation*, 6(1). <https://doi.org/10.1186/s40854-020-00185-2>
- Syed Mustapha Nazri, S. N. F., Zolkafilil, S., & Omar, N. (2019). Mitigating financial leakages through effective money laundering investigation. *Managerial Auditing Journal*, 34(2), 189–207. <https://doi.org/10.1108/MAJ-03-2018-1830>
- Teichmann, F. M. J., & Falker, M. C. (2020). Money laundering via cryptocurrencies – potential solutions from Liechtenstein. *Journal of Money Laundering Control*, 24(1), 91–101. <https://doi.org/10.1108/JMLC-04-2020-0041>
- Trozze, A., Davies, T., & Kleinberg, B. (2023). Of degens and defrauders: Using open-source investigative tools to investigate decentralized finance frauds and money laundering. *Forensic Science International: Digital Investigation*, 46, 301575. <https://doi.org/10.1016/j.fsidi.2023.301575>



- Tsuchiya, Y., & Hiramoto, N. (2021). How cryptocurrency is laundered: Case study of Coincheck hacking incident. *Forensic Science International: Reports*, 4, 100241. <https://doi.org/10.1016/j.fsir.2021.100241>
- van Wegberg, R., Oerlemans, J. J., & van Deventer, O. (2018). Bitcoin money laundering: mixed results?: An explorative study on money laundering of cybercrime proceeds using bitcoin. *Journal of Financial Crime*, 25(2), 419–435. <https://doi.org/10.1108/JFC-11-2016-0067>
- Wardani, A., Ali, M., & Barkhuizen, J. (2022). Money Laundering through Cryptocurrency and Its Arrangements in Money Laundering Act. *Lex Publica*, 9(2), 49–66. <https://doi.org/10.58829/lp.9.2.2022.49-66>
- Wronka, C. (2022). Anti-money laundering regimes: a comparison between Germany, Switzerland and the UK with a focus on the crypto business. *Journal of Money Laundering Control*, 25(3), 656–670. <https://doi.org/10.1108/JMLC-06-2021-0060>
- Yeung, K. (2019). Regulation by blockchain: The emerging battle for supremacy between the code of law and code as law. *Modern Law Review*, 82(2), 207–239. <https://doi.org/10.1111/1468-2230.12399>