Lex Publica
Jurnal Ilmu Hukum Asosiasi Pimpinan Perguruan Tinggi Hukum Indonesia
e-ISSN: 2579-8855
p-ISSN: 2354-9181
https://journal.appthi.org/index.php/lexpublica

The Convergence of Classical Punishment in Money Laundering: Follow the Money Principle Using Blockchain Approach

Efendi Lod Simanjuntak[1*], Yuris Trinaili[2], Purwono[2], Muhamad Helmi Md Said[3]

[1]Universitas Prasetiya Mulya, Tangerang, Indonesia
[2]Universitas Harapan Bangsa, Purwokerto, Indonesia
[3]University Kebangsaan Malaysia, Selangor, Malaysia

**Corresponding author: efendi@uhb.ac.id*

Abstract. The application of corporal punishment to criminals is crucial for ensuring justice and legal certainty, as well as maintaining public order. However, in law enforcement regarding money laundering, there has been a shift in focus to asset recovery, based on the "follow the money" principle, which prioritizes the recovery of the proceeds of crime over punishing the perpetrator. This approach has the potential to cause disruption, as recovery of losses should only occur after the perpetrator is found guilty under criminal law. In the absence of adequate asset recovery regulations, blockchain can be a solution to strengthen the asset recovery process. This technology provides transparency and accountability in tracking asset flows and ensures data permanence. Blockchain enables more efficient and secure asset recovery, supporting a faster recovery process, and reducing the potential for compromise. Reconciling asset recovery approaches with corporal punishment is crucial for creating a balance in the justice system that goes beyond maintaining peace.

Keywords: Follow the Money, Asset Recovery, Blockchain, Money Laundering, Corporal Punishment.

Abstrak. *Penerapan hukuman fisik terhadap pelaku tindak pidana penting untuk menjamin keadilan dan kepastian hukum, serta menjaga ketertiban umum. Namun, dalam penegakan hukum di bidang pencucian uang, terdapat pergeseran fokus ke pemulihan aset dengan prinsip "ikuti uangnya", yang mengutamakan kinerja hasil tindak pidana daripada menghukum pelaku. Pendekatan ini berpotensi menimbulkan gangguan, karena pemulihan kerugian seharusnya dilakukan setelah pelaku dinyatakan bersalah sesuai dengan hukum pidana. Dengan belum adanya regulasi kinerja aset yang memadai, blockchain dapat menjadi solusi dalam memperkuat proses pemulihan aset. Teknologi ini memberikan transparansi dan akuntabilitas dalam pelacakan arus aset, serta memastikan kekekalan data. Dengan blockchain, penyertaan aset dapat dilakukan secara lebih efisien dan aman, mendukung proses pemulihan yang lebih cepat, dan mengurangi potensi persetujuan. Rekonsiliasi antara pendekatan pemulihan aset dan hukuman fisik sangat penting untuk menciptakan keseimbangan dalam sistem peradilan yang tidak hanya menjaga perdamaian.*

Kata kunci: *Ikuti Uangnya, Pemulihan Aset, Blockchain, Pencucian Uang, Hukuman Fisik.*

1. Introduction

The handling of money laundering has evolved into two principal approaches, each reflecting distinct legal philosophies: the "follow the money" principle and the classical punishment approach. The "follow the money" principle emphasizes asset recovery as the primary objective, prioritizing the restitution of losses incurred due to crime over the mere imposition of corporal punishment on the offender.[1] This approach allows authorities to trace illicit funds and seize assets to restore the harmed party, even if the perpetrator's identity or location remains concealed.[2] Blockchain technology has emerged as a potent tool in this context, offering greater transparency and security in tracking financial flows across complex networks, ensuring that assets can be traced efficiently despite potential concealment or ownership transfers.[3]

In contrast, the classical punishment approach adheres to traditional criminal law principles, prioritizing the imposition of sanctions on individuals after conviction.[4] Under this model, asset forfeiture is secondary and contingent upon a judicial determination of guilt. This conventional framework safeguards procedural justice, ensuring that property confiscation only occurs following due legal process.[5] However, prioritizing punitive measures over immediate asset recovery

[1] Sebastian Pompe, *Iktisar Ketentuan Pencegahan Dan Pemberantasan Tindak Pidana Pencucian Uang*, (*Jakarta: NLRP,* 2011), 24.

[2] Joeroy et al., "Implementation of Follow the Money in Eradicating Corruption and Money Laundering," *International Journal of Social Health* 2, no. 5 (2023): 250. See also, Tb Soenmandjaja SD et al., "Law Enforcement of Digital Asset Confiscation in Money Laundering Crimes," *Jurnal Ekonomi Teknologi dan Bisnis* 3, no. 8 (2024): 1036.

[3] P. C. Sherimon et al., "A Blockchain Framework for Investment Authorities to Manage Assets and Funds." In *International Conference on Big Data Innovation for Sustainable Cognitive Computing,* (Cham: Springer Nature Switzerland, 2022), 218. See also, E. P. E. George et al., "Blockchain technology in financial services: enhancing security, transparency, and efficiency in transactions and services," *Open Access Res J Multidiscip Stud* 8, no. 1 (2024): 27; N. M. R. Mamulak et al., "Blockchain Technology: Unlocking New Frontiers in Data Management and Transparency," *Global International Journal of Innovative Research* 2, no. 9 (2024): 2258.

[4] Khilmatin Maulidah, and Ratna Kumala Sari, "The Urgency of the Follow the Money Approach in Law Enforcement Efforts Against Money Laundering Resulting from Corruption," *Sapientia Et Virtus* 9, no. 2 (2024): 448.

[5] Constance Gikonyo, "Criminal Forfeiture under Kenya's Proceeds of Crime and Anti-Money Laundering Act: Nature and Challenges," *African Journal of International and Comparative Law* 28, no. 4 (2020): 658. See also, Ana Fauzia, and Fathul Hamdani, "Analysis of the implementation of the non-conviction-based concept in the practice of asset recovery of money laundering criminal act in Indonesia from the perspective of presumption of innocence," *Jurnal Jurisprudence* 11, no. 1 (2022): 58; Fadel Ilato et al., "Criminal Action Without Proven in Money Laundering in Indonesia," *Jambura Law Review* 3, no. 4 (2021): 182.

can result in the dissipation or transfer of criminal proceeds before restitution, thus undermining the objectives of justice and societal protection.[6]

The integration of these two approaches raises significant normative questions, particularly concerning the legality of confiscating assets before the formal conviction of the perpetrator.[7] Criminal law mandates that property can only be confiscated after establishing culpability through a court ruling.[8] Consequently, implementing asset recovery without corresponding proof of guilt challenges the evidentiary principles inherent in criminal justice and may provoke disputes over human rights and due process.[9]

Indonesia faces both technical and normative barriers in adopting the "follow the money" approach. Cross-border asset tracing requires robust international cooperation, comprehensive bilateral and multilateral agreements, and access to accurate financial records.[10] Inadequate legal frameworks and the decentralized nature of illicit financial flows complicate asset recovery efforts. Blockchain technology offers solutions to these technical obstacles by providing a secure, immutable ledger that enhances transparency in transaction monitoring, supports international collaboration, and mitigates risks of asset concealment.[11] Through blockchain, temporary confiscation mechanisms can be effectively implemented,

---

[6] B. S. Haris, "Added value and challenges of the follow-the-money approach in environmental crimes. AML," *CFT Journal: The Journal of Anti Money Laundering and Countering the Financing of Terrorism* 2, no. 2 (2024): 116.

[7] Iwan Roy Charles, "Analysis of Article 69 of Law Number 8 of 2010 concerning Prevention and Eradication of the Crime of Money Laundering in the Perspective of Legal Certainty," *Melayunesia Law* 6, no. 4 (2021): 62. See also, Ariman Sitompul, and Aisyah Aisyah, "Fair Law in Money Laundering with the Origin of Corruption with the Concept of Asset Seizure," *International Asia of Law and Money Laundering (IAML)* 3, no. 3 (2024): 155.

[8] Gikonyo, "Criminal Forfeiture under Kenya's," 661.

[9] Doron Goldbarsht, "Adapting confiscation and anti-money laundering laws to the digital economy: exploring the Australian interplay between proceeds and technology," *Journal of Money Laundering Control* 27, no. 3 (2024): 475. See also, Fauzia, and Hamdani, "Analysis of the," 60; Dinesh Kumar et al., "Assessing the viability of blockchain technology for enhancing court operations." *International Journal of Law and Management* 65, no. 5 (2023): 428.

[10] Elżbieta Hryniewicz-Lach, "Improving asset confiscation: in the quest for effective and just solutions," *ERA Forum*, 25, no. 2, (2024): 234. See also, Andhira Wardani et al., "Money laundering through cryptocurrency and its arrangements in money laundering act," *Lex Publica* 9, no. 2 (2022): 51; Victoria Koutsoupia, "Challenges of the Use of Virtual Assets in Money Laundering," *Nordic Journal of European Law* 6, no. 4 (2023): 54.

[11] Aastha Jain et al., "Blockchain-Based Criminal Record Database Management," In *2021 Asian Conference on Innovation in Technology (ASIANCON)*, (New York City: IEEE, 2021), 2. See also, Md Motaleb Hossen Manik et al., "Redefining crime record storage: An advanced architecture harnessing the power of blockchain technology," In *2023 26th International Conference on Computer and Information Technology (ICCIT)*, (New York City: IEEE, 2023), 2; Muhammad Talha, "Blockchain in Accounting: Transforming Transparency and Security in Financial Records," *Dandao Xuebao/Journal of Ballistics* 36, no. 1 (2024): 67; Mamulak et al., "Blockchain Technology: Unlocking," 2259.

preventing perpetrators from moving assets while legal proceedings are underway.[12]

Legal uncertainty over pre-conviction asset forfeiture also presents the risk of power abuse by law enforcement agencies.[13] Establishing a strong legal foundation, such as through the anti-money laundering law and the asset forfeiture bill, is crucial to ensure that asset recovery processes adhere to principles of justice and legal certainty.[14] Blockchain complements these regulatory frameworks by creating a verifiable, tamper-proof record of asset ownership and transactions, thereby reducing potential disputes and improving the efficiency of asset recovery.[15]

The practical implementation of the "follow the money" principle in Indonesia demonstrates the synergy between asset recovery and technology. Institutions like the Corruption Eradication Commission (*Komisi Pemberantasan Korupsi*/KPK) and the Financial Transaction Reports and Analysis Center (*Pusat Pelaporvan dan Analisis Transaksi Keuangan*/PPATK) have successfully utilized digital tools to trace assets in corruption cases, achieving significant recovery while adhering to legal and procedural safeguards.[16] Blockchain further strengthens these efforts by enhancing transparency, supporting evidence collection, and facilitating coordination among domestic and international authorities.[17]

Despite these advancements, challenges persist in balancing asset recovery and punishment. Traditional criminal law requires proof of a predicate offense before assets can be seized, which may delay restitution and enable asset transfer or

[12] Funmilola Olatundun Olatoye et al., "Blockchain in asset management: An extensive review of opportunities and challenges," *International Journal of Science and Research Archive* 11, no. 1 (2024): 2112. See also, Vimal Awasthi, "Blockchain Revolution in Asset Management: A Comprehensive Analysis and Implementation Framework," *Interantional Journal of Scientific Research in Engineering and Management*, 8, no. 5 (2024), 4.

[13] Fauzia, and Hamdani, "Analysis of the," 62. See also, Kumar et al., "Assessing the viability of blockchain," 429.

[14] Sahuri Lasmadi et al., "Asset Seizure of Money Laundering Crimes Arising from Corruption in the Perspective of Legal Certainty and Justice," *Pandecta Research Law Journal* 18, no. 2 (2023): 361. See also, Sani Muhamad Isa Meiryani, and Johan Muliadi Kerta, "Money laundering in corruption cases in Indonesia," *Journal of Money Laundering Control* 27, no. 1 (2024): 130.

[15] Ankur Agrawal et al., "Transformation of Asset Management Systems Through Blockchain," In *Utilizing Blockchain Technologies in Manufacturing and Logistics Management*, (Pennsylvania: IGI Global Scientific Publishing, 2022), 163. See also, Jain et al., "Blockchain-Based Criminal," 3; Manik et al., "Redefining crime record storage," 3.

[16] Nani Mulyati, and Aria Zurnetti, "Asset Recovery as a Fundamental Principal in Law Enforcement of Corruption by Corporations," *Andalas International Journal of Socio-Humanities* 4, no. 1 (2022): 52. See also, Meiryani, and Kerta, "Money laundering in corruption," 133.

[17] Ilima Fitri Azmi, and Alih Aji Nugroho, "Anti-corruption system 4.0: The adoption of blockchain technology in the public sector," *Integritas: Jurnal Antikorupsi* 9, no. 1 (2023): 94. See also, Shashank Joshi, and Arhan Choudhury, "Tokenization of real estate assets using blockchain," *International Journal of Intelligent Information Technologies (IJIIT)* 18, no. 3 (2022): 4; George et al., "Blockchain technology in financial," 28.

dissipation.[18] Blockchain mitigates these challenges by maintaining immutable records of transactions, ensuring data integrity, and supporting expedited recovery procedures without compromising judicial fairness.[19] Integrating classical punitive measures with modern asset recovery approaches ensures that offenders are held accountable while maximizing restitution and deterrence.[20]

Considerable research has explored the "follow the money" approach and blockchain-based asset recovery, but several gaps remain, particularly in the context of Indonesia. First, existing studies have largely focused on technical solutions and international experiences, with limited attention to the domestic legal and institutional frameworks needed for effective implementation.[21] While blockchain is acknowledged for its potential, empirical studies demonstrating its practical integration within Indonesian anti-money laundering systems are scarce.[22] Second, the interplay between asset recovery and classical punishment has not been fully examined in terms of policy coherence and judicial fairness, raising questions about how to balance restitution with procedural justice.[23] Third, while blockchain enhances transparency and immutability, challenges remain regarding legal admissibility, cross-border cooperation, and human rights safeguards, which have received limited scholarly attention.[24] Lastly, most studies have not addressed the capacity-building needs of law enforcement officers and institutions in using blockchain for complex financial investigations, which is critical for operational effectiveness.[25] Addressing these gaps is essential to design a comprehensive framework that integrates technology, law, and procedural justice in Indonesia's fight against money laundering.

---

[18] Goldbarsht, "Adapting confiscation and anti-money," 476.

[19] Milan Feltovic, "Utilizing Blockchain Technology to Modernize Police Operations: Ensuring Security, Transparency, and Efficiency," *Eximia* 13 (2024): 663. See also, Kumar et al., "Assessing the viability of blockchain," 430.

[20] Andrie Wahyu Setiawan et al., "Problematics of Execution of Assets of Convictions in Efforts Recovery of State Losses," *Sch Int J Law Crime Justice* 7, no. 2 (2024): 93. See also, Haris, "Added value and challenges," 118.

[21] Fauzia, and Hamdani, "Analysis of the," 63. See also, Ilato et al., "Criminal Action Without," 184; Hryniewicz-Lach, "Improving asset confiscation," 234; Lasmadi et al., "Asset Seizure of Money Laundering," 363.

[22] George et al., "Blockchain technology in financial," 29. See also, Mamulak et al., "Blockchain Technology: Unlocking," 2261; Jain et al., "Blockchain-Based Criminal," 4; Manik et al., "Redefining crime record storage," 4; Azmi, and Nugroho, "Anti-corruption system 4.0," 95.

[23] Haris, "Added value and challenges," 119. See also, Goldbarsht, "Adapting confiscation and anti-money," 477; Setiawan et al., "Problematics of Execution," 93.

[24] Kumar et al., "Assessing the viability of blockchain," 431. See also, Wardani et al., "Money laundering through cryptocurrency," 52; Koutsoupia, "Challenges of the Use of Virtual," 55; Olatoye et al., "Blockchain in asset management, "2114.

[25] Sherimon et al., "A Blockchain Framework," 219. See also, Meiryani, and Kerta, "Money laundering in corruption," 134; Joshi, and Choudhury, "Tokenization of real estate," 5.

Thus, this research aims to analyze the implementation of the "follow the money" approach in money laundering cases, examine the role of blockchain technology in enhancing transparency and security in asset recovery, and explore strategies for integrating asset recovery with classical punishment to ensure justice, restitution, and effective crime prevention in Indonesia. Accordingly, this research formulated these Research Questions (RQs):
RQ1. How does the "follow the money" approach facilitate asset recovery in money laundering cases, and what role does blockchain technology play in enhancing the transparency and security of these processes?
RQ2. What are the main challenges in balancing asset recovery with classical punishment principles, and how can blockchain mitigate conflicts between legal evidence requirements and efficient asset tracing?
RQ3. How can a combined approach of asset recovery and classical punishment, supported by blockchain technology, be effectively implemented in Indonesia to ensure justice, restitution, and crime prevention?

2. Methodology

A conceptual doctrinal approach is used to assess the extent to which the "follow the money" approach aligns with classical punishment objectives. This approach also integrates the use of blockchain technology, which can strengthen the tracking and recovery of assets related to criminal offenses, making them more transparent and secure.[26] The legal analysis aims to identify solutions that can address the shortcomings of existing regulations, including the potential application of blockchain technology to provide greater transparency and accountability in the tracking of proceeds of crime assets.[27] This can support the implementation of more effective regulations in asset recovery efforts. One key focus is the reconciliation between 'asset recovery' and 'corporal punishment', which requires a balance to ensure the legal system not only provides a deterrent but also restores victims' losses. In this context, blockchain can accelerate the asset recovery process by providing valid and irreversible proof of asset origins and ownership, while strengthening retributive justice by ensuring that perpetrators are held accountable.[28]

This reconciliation process involves consideration of policy sustainability, implementation effectiveness, and public acceptance of both approaches. Blockchain technology has the potential to support policy sustainability by improving the efficiency of asset tracking and loss recovery, as well as providing

[26] Azmi, and Nugroho, "Anti-corruption system 4.0," 97.
[27] Joshi, and Choudhury, "Tokenization of real estate," 6.
[28] Jain et al., "Blockchain-Based Criminal," 5.

greater assurance of transparency in legal proceedings.[29] The integration of preventive 'asset recovery' and repressive 'corporal punishment' is expected to create a legal mechanism that not only prevents crime but also restores public confidence in the legal system.[30] Blockchain, with its ability to ensure authenticity and transparency of data, can strengthen this mechanism by making it easier to recover the proceeds of crime in a preventive manner.[31] This balanced approach is expected to create legal certainty, protect victims, and fulfill the needs of retributive and restorative justice, resulting in a comprehensive solution to build a credible and effective justice system. Blockchain, with its ability to permanently record transactions and be auditable, can strengthen public confidence in the integrity of the legal system, especially in ensuring that the proceeds of crime do not escape the recovery process.

3. Result and Discussion

3.1. Follow the Money and Blockchain Technology

The "follow the money" approach to money laundering focuses on tracing the flow of assets from the proceeds of crime.[32] This approach is not only oriented towards catching and punishing perpetrators, but also enables systematic identification of the origins of wealth. Blockchain, as a transparent decentralized technology, can strengthen these mechanisms by providing immutable transaction traces, allowing legal authorities to trace asset flows more efficiently and securely, even when the identity of the perpetrator is concealed. The financial trail left behind through suspicious transactions is often a key element in these traces, and blockchain can ensure that such transaction data remains verified and cannot be manipulated.[33] Legal authorities can seize or forfeit assets before the perpetrator is found, even when his or her identity is concealed.[34] The financial trail left behind through suspicious transactions is often a key element in these traces, especially when the pattern of transactions contradicts the financial profile of the perpetrator.

This approach presents significant challenges in implementation. A key question that often arises is the prioritization between asset confiscation and

[29] Kumar et al., "Assessing the viability of blockchain," 432.

[30] Olatoye et al., "Blockchain in asset management, "2115.

[31] Talha, "Blockchain in Accounting," 68.

[32] Lendra Dika Kurniawan et al., "Kajian Kriminologi Terhadap Pengunaan Mata Uang Kripto Sebagai Media Pencucian Uang," *Jurnal Suara Hukum* 5, no. 1 (2023): 91. See also, Joeroy et al., "Implementation of Follow," 251.

[33] George et al., "Blockchain technology in financial," 31.

[34] Zeljko Bjelajac, and Momcilo B. Bajac, "Blockchain technology and money laundering," *Law Theory & Prac.* 39, no. 3 (2022): 24. See also, Soenmandjaja SD et al., "Law Enforcement of Digita,l" 1036.

prosecuting offenders.[35] When the focus is on punishing perpetrators, the proceeds of crime can potentially be transferred to other parties or lost, hindering the recovery of state losses. Confiscation or seizure of assets carried out earlier with the principle of "follow the money" is often constrained by legal rules that require proof of the original criminal offense first.[36] This can slow down the asset recovery process and create a conflict with the fundamental principle of criminal law, which prioritizes conviction of offenders based on legitimate evidence before action is taken against assets. Blockchain, with its ability to permanently store transaction data, can reduce this bottleneck by ensuring that evidence related to criminal assets is clearly and securely recorded.[37]

This "follow the money" approach also clashes with traditional sentencing principles that emphasize physical punishment as a form of justice.[38] In the conventional legal perspective, corporal punishment is considered important to create a deterrent effect while upholding justice in society.[39] Contemporary regulatory regimes show a shift in orientation towards asset recovery, which prioritizes securing the proceeds of crime over punishing the perpetrators.[40] This shift poses a major challenge to the legal system, as it has the potential to create an imbalance between traditional punishment goals and modern, more pragmatic approaches.[41] Blockchain can be a tool to achieve this balance, by ensuring that seized assets can be clearly traced, speeding up the recovery process and supporting transparent justice.

In the Indonesian context, the "follow the money" approach has been implemented by institutions such as Corruption Eradication Commission (*Komisi Pemberantasan Korupsi/KPK*) and Financial Transaction Reports and Analysis Center (*Pusat Pelaporvan dan Analisis Transaksi Keuangan/PPATK*).[42] Several major corruption cases have shown the success of tracing the flow of funds in uncovering the proceeds of crime, which are scattered in the form of property, luxury vehicles,

[35] Yolanda Adelia Bella Lestari Sam et al., "Legalitas Cryptocurrency Dalam Tindak Pidana Kejahatan Pencucian Uang," *DiH: Jurnal Ilmu Hukum* 3, no. 4 (2022): 112.

[36] Goldbarsht, "Adapting confiscation and anti-money," 479.

[37] Kumar et al., "Assessing the viability of blockchain," 434.

[38] Haris, "Added value and challenges," 121.

[39] Sri Lestari Handayani, "Assets Recovery of Money Laundering Criminal Acts: A Study of Restoring Assets for Money laundring Criminal Acts Related in the Account of Overseas Bank," *International Journal of Social Science and Human Research*, 4, no. 7 (2021): 36.

[40] Melky AS Mendrofa, "Legal Study of Asset Confidentiality Without Punishment as An Alternative for Providing Justice for the State and Persons of Corruption," *International Journal of Law and Society* 1, no. 2 (2024): 48.

[41] Tommaso Trinchera, "Confiscation and asset recovery: Better tools to fight bribery and corruption crime," In *Criminal Law Forum*, 31, no. 1 (Dordrecht: Springer Netherlands, 2020), 57.

[42] Joeroy et al., "Implementation of Follow," 252.

and bank accounts.[43] In cases of corruption involving public funds, tracing the flow of funds has resulted in the recovery of significant assets while providing a strong basis for prosecuting the main perpetrators. Blockchain can help further in this regard, by providing a transparent platform for asset tracing, increasing efficiency and reducing the potential for abuse of authority.[44] Administrative and legal barriers often slow down the recovery process, so better synergies between law enforcement agencies and the courts are needed.[45]

These challenges demonstrate the importance of strategic balance in the application of the principle of "follow the money." The ideal policy should be able to effectively integrate asset confiscation efforts with the punishment of perpetrators in accordance with the principles of justice.[46] Thus, the objectives of punishment, which include punishment, restitution, and crime prevention, can be achieved without compromising any of its important aspects. Blockchain can accelerate and simplify this process, providing greater legal certainty and transparency in every step of law enforcement.[47]

The changing orientation of money laundering law enforcement has seen a major shift in attention away from corporate punishment of offenders towards confiscation or freezing of proceeds of crime. This approach reflects a greater focus on recovering economic losses, while enforcement against individual offenders tends to receive less attention.[48] In many cases, once the proceeds of crime have been confiscated or forfeited, the issue of punishing the perpetrator becomes secondary.[49] This is not in line with the purpose of classical punishment which places corporal punishment as a form of retribution for crime and a way to provide a deterrent effect.

The modern approach that prioritizes "asset recovery" is often seen as a response to the increasing complexity of transnational money laundering offenses.[50] While pragmatically relevant, this orientation runs the risk of creating gaps in the criminal justice system if it is not accompanied by the punishment of criminals. An overemphasis on asset recovery may lead to the perception that offenders can escape criminal responsibility as long as illegally acquired assets are

[43] Meiryani, and Kerta, "Money laundering in corruption," 135.

[44] Tareq Na'el Al-Tawil, "Anti-money laundering regulation of cryptocurrency: UAE and global approaches," *Journal of Money Laundering Control* 26, no. 6 (2023): 1155.

[45] Handayani, "Assets Recovery of Money," 36.

[46] Valeriia Dyntu, and Oleh Dykyi, "Cryptocurrency in the system of money laundering," *Baltic Journal of Economic Studies* 4, no. 5 (2018): 78. See also, Riswanto et al., "Legal Aspects in Handling Money Laundering Cases In Indonesia," *Asian Journal of Social and Humanities* 2, no. 8 (2024): 1820.

[47] Feltovic, "Utilizing Blockchain Technology," 664.

[48] Maulidah, and Sari, "The Urgency of the Follow," 449.

[49] Sulvia Triana Hapsari et al., "Confiscation of assets in economic crime," *Audito Comparative Law Journal (ACLJ)* 3, no. 2 (2022): 78.

[50] Soenmandjaja SD et al., "Law Enforcement of Digital," 1037.

successfully seized.[51] This is contrary to the principle of retributive justice, which requires that perpetrators be given a punishment proportionate to their actions.

In this context, blockchain technology can play an important role in supporting asset recovery. By recording assets in a secure and transparent network, blockchain can facilitate more efficient and accurate tracking, while ensuring that asset seizures are not hampered by perpetrators' manipulation or diversion of assets.[52]

3.2. Challenges in Balancing Asset Recovery and Punishment

The purpose of punishment has a plural dimension that combines utilitarian and retributivist views. The utilitarian view focuses on the practical benefits of punishment, such as the prevention of crime through deterrence or the rehabilitation of offenders back into society.[53] The retributivist view emphasizes punishment as a form of just retribution for criminal acts committed. In money laundering crimes, the utilitarian approach often dominates, with a priority on asset recovery as an effort to restore state losses. This approach can overlook the retributivist principle, which places the punishment of the perpetrator as an important element in creating substantive justice.[54]

The imbalance between corporate punishment and asset recovery in money laundering law enforcement can have an impact on the lack of legal certainty and sense of justice in society.[55] Law enforcement that is only oriented towards the recovery of economic losses has the potential to override the community's right to see criminals held criminally responsible.[56] The concept of corporal punishment that is the basis of classical punishment should remain an integral part of the enforcement process against money laundering offenses, and blockchain can strengthen the application of asset recovery with greater transparency and efficiency in the process.[57]

---

[51] Akin Gump, and Christopher Leonard, "Blockchain: regulating the future of finance," *International financial law review* 35, no. 13 (2016): 1. See also, Setiawan et al., "Problematics of Execution," 95. See also, Rusianto et al., "Application of the Elements of Money Laundering Crime in Indonesian Jurisprudence," *Bulletin of Science, Technology and Society* 2, no. 3 (2023): 47.

[52] Agrawal et al., "Transformation of Asset," 164.

[53] Gaspare Jucan Sicignano, "Money laundering using cryptocurrency: the case of bitcoin!," *Athens JL* 7, no. 4 (2021): 257.

[54] Riccardo de Caria, "Blockchain-based money as the ultimate challenge to sovereignty: Reflections from a public economic law perspective," *European Journal of Comparative Law and Governance* 6, no. 2 (2019): 137.

[55] Samuel Sittlington, and Jackie Harvey, "Prevention of money laundering and the role of asset recovery," *Crime, Law and Social Change* 70, no. 4 (2018): 426.

[56] Vijay K. Vemuri, "Blockchain: a practical guide to developing business, law, and technology solutions," 7, no. 8 (2018): 162.

[57] Bahriye Basaran-Brooks, "Money laundering and financial stability: does adverse publicity matter?," *Journal of Financial Regulation and Compliance* 30, no. 2 (2022): 199.

Some theories related to the purpose of classical punishment that are relevant to this research are as follows:

1. Absolute Theory / Retribution

   According to this absolute theory, punishment is imposed solely because a person has committed a criminal offense or crime. Criminal punishment is an uncompromising thing to be given as retaliation for a crime.[58] According to Immanuel Kant,[59] punishment is a "*Kategorische Imperatif*" where a person must be punished by a judge because he has committed a crime so that punishment shows a demand for justice. This absolute demand of justice is seen in Immanuel Kant's opinion in his book "Philosophy of Law" as follows:

   "Punishment is never imposed solely as a means to promote some other good, either for the offender or for society, but must in all cases be imposed because the person has committed a crime."

   This theory is considered as a theory of retaliation for this theory, Andi Hamzah[60] gave the opinion that the theory of retaliation says that punishment is not aimed at practical purposes, such as fixing criminals, but the crime itself contains elements of imposing punishment, so it is not necessary to think about the benefits of imposing punishment.[61] This means that the theory of retaliation considers how to foster the offender even though the offender has the right to be fostered to become a useful human being in accordance with his dignity.

   In modern applications, technologies such as blockchain can support retributivist principles by providing transparency and clarity in the tracking of proceeds of crime assets. Blockchain enables legal authorities to ensure that illegally obtained assets can be traced and seized with transparency that cannot be manipulated. This supports the principle of retributive justice by ensuring that perpetrators are not only punished but also required to return unlawfully acquired assets. Blockchain provides immutable evidence of the

[58] Andi Hamzah, *Sistem Pidana dan Pemidanaan Indonesia dari retribusi ke reformasi*, (Jakarta: Pradnya Paramita, 1986), 23.

[59] Immanuel Kant, *Philosophy of Law*, (Cambridge: Cambridge University Press, 1797), 34.

[60] Hamzah, "*Sistem Pidana dan Pemidanaan,"* 24. See also, Abigail Ahmad Taufiq et al., "Pancasila as a Political Ethic," *International Journal of Religion Education and Law* 1, no. 2 (2022): 114.

[61] C. Djisman Samosir, *Fungsi pidana penjara dalam sistem pemidanaan di Indonesia*, (Tanggerang: Binacipta, 1992), 42.

origin of assets, which supports a fairer and more transparent application of justice in legal proceedings.[62]

2. Objective/Relative Theory
   Goal theorists view that everything should be used to achieve utilization both with regard to the guilty person and with regard to the outside world. For example, isolating and correcting criminals or deterring potential criminals will make the world a better place.[63] The justification for the existence of punishment according to this theory lies in its purpose. The punishment is imposed not *quia peccatum est* (because people make mistakes) but *ne peccetur* (so that people do not commit crimes). This goal theory seeks to realize order in society.
   The purpose of punishment in crime prevention can be divided into two main categories, namely special prevention and general prevention.[64] Special prevention (*speciale preventie*) focuses on the effect of punishment directed at the offender, with the aim of preventing the individual from repeating their criminal acts. Through this approach, punishment functions as a means of educating and rehabilitating the convict to become a good and productive member of society in accordance with human dignity. Meanwhile, general prevention emphasizes the role of punishment in maintaining public order and deterring potential offenders. Its effect is directed toward society at large, intending to create fear or awareness that discourages people from engaging in criminal behavior. Together, these two purposes illustrate that punishment serves not only as retribution but also as an instrument for social protection and moral guidance.
   According to Johan Andenaes,[65] general prevention manifests in three significant forms of influence that collectively strengthen the function of punishment in maintaining social order. First, the deterrence effect serves as a preventive measure, where the threat or experience of punishment discourages individuals from committing crimes. Second, the reinforcement of moral prohibitions emphasizes that punishment reaffirms and upholds the moral norms and values that exist within society,

[62] Anandaganesh Balakrishnan et al., "Blockchain Empowerment in Sanctions and AML Compliance: A Transparent Approach," *International Journal of Computer Trends and Technology 72* no. 5 (2024): 15. See also, Manik et al., "Redefining crime record storage," 6.

[63] Barda Nawawi Arief Muladi, *Teori-teori dan Kebijakan Pidana*, (Bandung: Bandung, PT. 2010).

[64] Joeroy et al., "Implementation of Follow," 254.

[65] Johannes Andenaes, "General prevention revisited: Research and policy implications," *The Journal of Criminal Law and Criminology* (1973-) 66, no. 3 (1975): 342. See also, Fenty Nur Hidayah et al., "Analisis Yuridis Terhadap Kasus Pencucian Uang (Money Laundering): Perspektif Hukum Perbankan Indonesia," *Journal Sains Student Research* 3, no. 1 (2025): 148.

reminding citizens of the boundaries between acceptable and unacceptable behavior. Third, the formation of law-abiding habits highlights that the consistent enforcement of criminal sanctions cultivates a habitual respect for the law among members of society. Through these three dimensions, general prevention not only deters crime but also fosters moral awareness and legal compliance as integral aspects of social behavior.

In relation to this opinion, Van Veen[66] argues that general prevention carries three essential functions that reinforce the role of punishment in maintaining legal and social order. First, punishment serves to uphold the authority of the law, ensuring that the law remains respected and recognized by society as a binding rule that must be obeyed. Furthermore, it plays a vital role in enforcing legal norms, demonstrating that any violation of the law is unacceptable and will inevitably receive appropriate sanctions. Beyond these functions, punishment also contributes to shaping new social norms, as it helps society adapt to evolving values and standards in line with social development. Thus, general prevention not only safeguards the law's authority and integrity but also supports the continuous moral and normative growth of the community.

In the modern context, blockchain can reinforce this theory of purpose by providing a transparent and secure platform for the tracking of criminal assets. The use of blockchain in asset recovery can serve as a potential deterrent, as perpetrators can feel that their illegally acquired assets will not escape confiscation, even when their identity is hidden. Blockchain can also strengthen general prevention by increasing transparency in law enforcement and showing the public that violations of legal norms will be dealt with firmly, because illegal transactions can be clearly detected and traced.[67]

3. Combined Theory

   The combined theory is a combination of relative theories which according to this combined theory is that the purpose of punishment is always to repay the wrongdoing of the criminal, but is also intended to protect society by realizing order provided that the severity of punishment must not

[66] Vincent Van Veen, and Cameron S. Carter, "The anterior cingulate as a conflict monitor: fMRI and ERP studies," *Physiology & behavior* 77, no. 4-5 (2002): 479. See also, J. W. De Keijser, *Punishment and Purpose: From Moral Theory to Punishment in Action, dissertatie*, (Leiden: Eigen Beheer, 2000), 12; Arief Muladi, and Barda Nawawi, *Teori-teori dan kebijakan Pidana*, (Bandung: Penerbit Alumni, 1998), 34.

[67] Manik et al., "Redefining crime record storage," 6.

exceed the limits of fair retribution.[68] According to Pellegrino Rossi[69] in his book "Traite de Droit Penal" states:
"Although retribution is the principle of punishment that the severity of punishment should not exceed a fair retribution, but punishment has various effects, including the repair of something broken in society and general prevention".

The combined theory of punishment is influenced by three schools of thought that integrate elements of retribution and social utility. The first school emphasizes retaliation as an inherent aspect of punishment, yet considers it meaningful only when it serves the broader interests of society. As stated by Pompe[70] in his book *"Handboek van het Ned. Strafrecht,"* punishment is a distinct form of sanction tied to specific objectives and should be applied when it contributes to the fulfillment of rules that benefit the public. The second school centers on maintaining public order, viewing retaliation as the essential nature of punishment while recognizing its ultimate purpose in safeguarding social welfare. The third school adopts a balanced perspective, giving equal weight to both retribution and the preservation of societal order. Together, these views reflect the effort to reconcile the moral justification of punishment with its practical role in promoting the common good.[71]
Similarly, Roeslan Saleh[72] argues that criminal law essentially operates on two main axes that define its fundamental direction. The first is the aspect of prevention, which emphasizes that criminal law functions as a system of sanctions designed to preserve social order and harmony by preventing the occurrence of crime. Through this preventive role, criminal law seeks to protect collective life and deter individuals from engaging in unlawful behavior. The second is the aspect of retaliation, which positions criminal law as a corrective and reactive mechanism against acts that violate legal norms. In this sense, punishment serves as both a response to wrongdoing and a means of affirming justice, ensuring that unlawful conduct receives an appropriate legal reaction.
In essence, punishment always protects the community and retaliation for legal actions. In addition, Saleh[73] also stated that the punishment contains

[68] Samosir, *Fungsi pidana penjara,"* 44.
[69] Pellegrino Rossi, *Traité de droit pénal*, (Américaine: Société typographique belge, 1843), 78.
[70] Willem Petrus Joseph Pompe, *Handboek van het Nederlandse strafrecht*, (Apeldoorn: Tjeenk Willink, 1959), 24. See also, Pompe, *Iktisar Ketentuan Pencegahan*, (*Jakarta: NLRP,* 2011), 24.
[71] Hamzah, *Sistem Pidana dan Pemidanaan,"* 25.
[72] Roeslan Saleh, *Beberapa asas-asas hukum pidana dalam perspektif.* (Jakarta: Aksara Baru, 1981), 78.
[73] Saleh, *Beberapa asas-asas hukum,* 78.

other things, namely that the punishment is expected as something that will bring harmony and as an educational process to make people acceptable back in society. The purpose of punishment is to shape the welfare of the state and society that does not contradict the norms of decency and humanity in accordance with Pancasila.

In the modern context, blockchain can play a role in supporting the principles of deterrence and retribution in the legal system. With the ability to store and verify irreversible transactions, blockchain can help recover the proceeds of crime more efficiently and transparently, strengthening asset recovery efforts in maintaining public order and ensuring that retribution against criminals can be applied more fairly and transparently.[74] This technology can also assist in the prevention process by providing clear and auditable evidence of the flow of funds associated with criminal offenses, which in turn reduces the potential for abuse of the legal system and strengthens the sense of justice in society.[75]

4. Integrative Theory

In this modern era, the problem of punishment has become increasingly complex due to efforts to pay more attention to factors related to human rights and make punishment operational and functional.[76] A fundamental multidimensional approach to the impact of punishment is needed, both in individual and social aspects.[77] This approach requires the selection of an integrative theory of the purpose of punishment, namely a concept of punishment that is able to fulfill its function in overcoming the damage caused by criminal acts, both at the individual and social levels.[78] The choice of integrative theory is based on sociological, ideological and juridical reasons.

---

[74] Akinrotimi Akinyemi Omololu, "Legal ramifications of blockchain technology," In *Decentralised Internet of Things: A Blockchain Perspective*, (Cham: Springer International Publishing, 2020), 217.

[75] Olga Cherednichenko et al., "Comparison of Blockchain-Based Data Storage Systems," In *COLINS 3,* (2024): 139.

[76] Henny Saida Flora et al., "The Urgency of Restorative Justice in Renewing Criminal Law," *Jurnal Hukum* 40, no. 2 (2024): 81. See also, Christopher Harding, and Richard W. Ireland, *Punishment: Rhetoric, rule, and practice*, (Oxfordshire: Routledge, 2022), 56; David Boonin, *The problem of punishment*, (Cambridge: Cambridge University Press, 2008), 72.

[77] Muladi, *Lembaga Pidana Bersyarat (3rd ed.),* (Bandung: Alumni, 2004), 23.

[78] Karlina Lina Apriani et al., "Criminal Law Politics: Corruption Eradication Strategy Through an Integrative Approach," *Unram Law Review* 4, no. 1 (2020): 35.

On a sociological level, as stated by Stanley Grupp[79] the appropriateness of a theory of punishment depends on a variety of factors, including one's view of human nature, the information received as useful knowledge, the type and extent of knowledge that can be achieved, and an assessment of the requirements of applying a particular theory.[80] It is also worth considering the possibility of meeting these requirements. Blockchain can play a role in this by providing transparency in tracking the flow of assets related to criminal offenses, providing clarity to the public regarding transparent and accountable law enforcement processes.[81]

Ideologically, with reference to Notonagoro's[82] opinion, Pancasila places humans in their overall dignity as creatures of God Almighty, with awareness to develop their nature both as individuals and as social beings. Pancasila as the foundation of the state provides confidence to the Indonesian people that happiness in life will be achieved if it is based on the principles of harmony and balance, both in human relations with nature, with other nations, with God, as well as in achieving outward progress and spiritual happiness. In this case, the application of blockchain provides a strong basis for ensuring social justice by providing fair and transparent access to legal processes, especially in terms of asset recovery, which is very relevant in the context of money laundering.[83]

From a juridical perspective, Herbert L. Packer[84] states that there are two main objectives in punishment, namely the provision of appropriate suffering to criminals and the prevention of crime. An integrative theory of punishment requires a holistic approach, where tensions between the various objectives of punishment cannot be resolved partially. The realization and recognition that no single goal of punishment is absolute suggests that an integrative approach aims to review punishment from multiple perspectives.[85] Blockchain can support this approach by facilitating the tracking and seizure of assets related to criminal offenses, enabling legal proceedings to take place transparently and effectively.[86]

---

[79] Stanley E. Grupp, *Theories of punishment*, Bloomington, (IN: Indiana University Press, 1971), 34.

[80] Muladi, and Nawawi, *Teori-teori dan kebijakan Pidana*, 35.

[81] Feltovic, "Utilizing Blockchain Technology," 665.

[82] Notonagoro, *Pembukaan Undang-Undang Dasar, dalam Pancasila Dasar Falsafah Negara, Cetakan Ketujuh, (*Jakarta: Bina Aksara, 1988), 45. See also, Arla Aglia et al., "The Role of Pancasila as a Political Ethical System: Understanding Indonesia's Ideological Foundation and Moral Guidance," *International Journal of Humanities, Law, and Politics*, 2, no. 3 (2024), 97.

[83] Koutsoupia, "Challenges of the Use of Virtual," 56.

[84] Herbert Packer, *The limits of the criminal sanction*, (California: Stanford university press, 1968), 42.

[85] Peter A. Sproat, "To what extent is the UK's anti-money laundering and asset recovery regime used against organised crime," *Journal of Money Laundering Control* 12, no. 2 (2009): 136.

[86] Hassan Alipour, "Money Laundry as a Threat to National Security," *Strategic Studies Quarterly* 9, no. 32 (2006): 364.

Criminal punishment is a necessity in society, but also a form of social control carried out by imposing suffering in order to achieve certain goals.[87] Based on the sociological, ideological, and juridical reasons above, Muladi and Nawawi[88] concluded that the purpose of punishment is to repair individual and social damage caused by criminal acts. There are objectives of punishment that must be fulfilled, with a casuistic emphasis, include: a). Prevention (general and specific); b). Protection of society; c). Maintenance of community solidarity; and d). Rewards or offsets.

Blockchain supports this goal by ensuring that criminal offenses, such as money laundering, can be tracked more efficiently and transparently.[89] In the context of asset recovery, blockchain enables authorities to track the proceeds of crime more effectively, thereby providing security for the public and preventing the transfer of assets that could impede the recovery of losses.[90]

The combined theory is considered relevant to answer the various problems that arise. The application of this theory in the case of cross-border money laundering does not only aim to sanction the perpetrators, but also to maintain public order and tranquility. Integrative theory is also relevant in this study because it emphasizes the aspect of human rights as the main factor in the implementation of punishment. In this case, blockchain can help guarantee a legal process that is fair, transparent, and free from abuse of authority.

3.3. Integrating Classical Punishment with Modern Approaches

In the context of law enforcement with justice and legal certainty, especially in the field of money laundering, there is a debate about the priority between corporal punishment and asset recovery.[91] It cannot be legally justified if assets are confiscated or seized before the application of punishment against the perpetrator. The principle that the purpose of classical punishment is to provide a deterrent effect to the perpetrator so that he realizes his mistake and does not repeat his actions.[92] The deterrent effect can only be achieved if the element of guilt in the

[87] Fangfang Zhou et al., "Visual analysis of money laundering in cryptocurrency exchange," *IEEE Transactions on Computational Social Systems* 11, no. 1 (2023): 737.

[88] Muladi, and Nawawi, *Teori-teori dan kebijakan Pidana*, 36.

[89] Jiajing Wu et al., "Toward understanding asset flows in crypto money laundering through the lenses of Ethereum heists," *IEEE Transactions on Information Forensics and Security* 19 (2023): 1998.

[90] Jain et al., "Blockchain-Based Criminal," 6.

[91] Ammar Oad et al., "Blockchain-enabled transaction scanning method for money laundering detection," *Electronics* 10, no. 15 (2021): 176.

[92] Ping He, "A typological study on money laundering," *Journal of Money Laundering Control* 13, no. 1 (2010): 18.

perpetrator has been proven, in accordance with the legal principle which states that "there is no punishment without guilt".[93]

Meanwhile, we know that money laundering or Money Laundering is essentially a secondary crime. It does not stand alone but is a criminal offense that always depends on the primary crime, so there can be no Money Laundering without the primary crime.[94] In the original criminal act, which is better known as predicate crime or predicate offense, the proof of the element of guilt in the defendant or perpetrator, as a criminal subject, must first be proven legally and convincingly (beyond reasonable doubt).[95] After that, it can only be examined whether there is a connection with the money laundering. It is important to trace the crime relationship between the main crime and the secondary crime.[96] It is important to ensure that there is no risk of double jeopardy, a situation where a person can be punished more than once for conduct related to the original crime.[97] The law must provide certainty that a person can only be punished for acts that he actually committed. For example, whether the perpetrator only committed the main criminal offense without any further criminal elements. If this is not carefully considered, then the perpetrator could potentially face multiple punishments for the same act.

If examined closely, the "follow the money" approach, which prioritizes the recovery of assets resulting from money laundry crimes (asset recovery), is actually contradictory to the classic punishment objective which prioritizes corporal punishment for perpetrators.[98] The object of money laundering is essentially the collection of wealth from the proceeds of crime in accordance with the principle of follow the money, so the most important thing is how to recover losses not on the punishment of the perpetrators.[99] This is currently the trend as seen from the asset forfeiture bill currently being drafted by the House of Representatives of the Republic of Indonesia.

As a result of the change in orientation that prioritizes the confiscation or freezing of assets or property derived from money laundering crimes rather than the imprisonment of the perpetrators, the issue of law enforcement against

[93] Yujing Sun et al., "Bitanalysis: A visualization system for bitcoin wallet investigation," *IEEE Transactions on Big Data* 9, no. 2 (2022): 628.

[94] Ilato et al., "Criminal Action Without," 185.

[95] Musdayanti Muchtar et al., "Proving of Predicate Crimes in Cases of Money Laundering Crimes," *Alauddin Law Development Journal* 5, no. 2 (2023): 414.

[96] Charles, "Analysis of Article 69," 64.

[97] Nani Widya Sari et al., "Relationship Between Money Laundering Crime and Corruption Crime as Originate Crime from the Criminal Perspective," *International Journal of Integrative Sciences* 2, no. 3 (2023): 35.

[98] Joeroy et al., "Implementation of Follow," 254.

[99] Michael Levi, "Money laundering and its regulation," *The Annals of the American Academy of Political and Social Science* 582, no. 1 (2002): 188.

criminals (people) tends to decrease.[100] This means that if the assets resulting from money laundering crimes have been successfully confiscated or seized, then the aspect of punishment against the subject of the perpetrator becomes a secondary issue or not the main one anymore.[101] This is not in line with the classical purpose of punishment, which requires the punishment of the perpetrator to exceed the recovery aspect of the consequences of the act.

In principle, the contemporary modern approach in handling money laundering prioritizes asset recovery, while the classical punishment approach, which focuses on punishing the perpetrator through corporal punishment, should not be ignored.[102] In many cases, the legal process requires the perpetrator to be found guilty through a court decision first, which then becomes the basis for confiscating or seizing the assets and proceeds of crime obtained by the perpetrator.[103] This approach is clearly reflected in efforts to recover state losses, which are carried out through a series of legal steps involving stipulations through court decisions.

The recovery of state losses due to corruption and money laundering in court decisions is always included in the form of "compensation money".[104] This provision requires the perpetrator to first be found guilty through a court decision with permanent legal force (*inkracht*) before the proceeds of crime can be confiscated and formally seized for the state. The approach to eradicating money laundering that prioritizes the recovery of the proceeds of crime to the exclusion of the punishment of the perpetrator is not in line with the essence of the classical purpose of punishment.

Law enforcement against perpetrators of money laundering crimes must be carried out firmly and made a top priority.[105] This approach not only prevents impunity for perpetrators, but also ensures that criminal accountability is imperative and must be upheld in court. In accordance with the principle of the classical purpose of punishment, through the application of corporal punishment, this approach emphasizes the importance of punishing the perpetrator as a form

[100] Muhammad Usman Kemal, "Anti-money laundering regulations and its effectiveness," *Journal of Money Laundering Control* 17, no. 4 (2014): 418.

[101] Kern Alexander, "The international anti-money-laundering regime: the role of the financial action task force," *Journal of Money Laundering Control* 4, no. 3 (2001): 243.

[102] Mulyati, and Zurnetti, "Asset Recovery as a Fundamental," 53.

[103] Wisnu Nanda Hutama and Dewi Gunawati, "Implementation of the Confiscation and Auction of Assets Convicted in the Jiwasraya Corruption Case to Recover State Losses," *International Journal of Multicultural and Multireligious Understanding*, 11, no. 5 (2024): 470.

[104] Hery Purwanto, and Siti Ummu Adillah, "The Recovery of Assets Results of Corruption Through Additional Criminal Payment of Replacement Money," *Law Development Journal* 3, no. 2 (2021): 265.

[105] Killian J. McCarthy et al., "Modeling the money launderer: Microtheoretical arguments on anti-money laundering policy," *International Review of Law and Economics* 43, no. 3 (2015): 152.

of justice, and does not only focus on confiscating or seizing assets owned by the perpetrator as a result of crime

Pragmatically, there needs to be a balance between pursuing the perpetrator and holding the perpetrator criminally responsible. This is called a reconciliatory approach to the two methods as illustrated in the Table 1.

Table 1. Reconciliation between the follow the money principle and corporal punishment

Approach/Issue	Description	Recommendation
The "follow the money" approach in Money Laundry is not in line with the classical punishment objective	The prioritization of the recovery of assets from Money Laundry crimes (Asset recovery) contradicts the purpose of classical punishment which aims to impose corporal punishment on the perpetrator.	There must be a balance between the "asset recovery" approach and "corporal punishment" to prevent repetition of acts and to avoid impunity.

Balanced law enforcement in money laundering cases emphasizes the importance of punishing perpetrators rather than simply confiscating the proceeds of crime.[106] If the perpetrator has been tried and found guilty, then the property resulting from the crime can be confiscated through a restitution mechanism. Conversely, without a court decision declaring the offender's guilt, asset forfeiture cannot be legally carried out.[107] The imposition of corporal punishment against the perpetrator, in accordance with the classical purpose of punishment, serves as a deterrent factor for both the perpetrator and the wider community.[108]

Article 35 of Law Number 8/2010 on the Prevention and Eradication of Money Laundering (Anti-Money Laundering Law) states that the defendant is obliged to prove that his assets are not the proceeds of a criminal offense.[109] This provision demonstrates the application of the reverse proof principle in line with the concept of "follow the money", which emphasizes the pursuit of assets or proceeds of crime. This concept is relevant in the money laundering regulatory

[106] I. Ketut Suwitra et al., "Pencegahan Tindak Pidana Pencucian Uang Melalui Lintas Internasional Dalam Perspektif Undang-Undang Tindak Pidana Pencucian Uang," *Jurnal USM Law Review* 7, no. 2 (2024): 968.

[107] Rohmatul Jannah et al., "Efektivitas Mekanisme Pencegahan dan Pemberantasan Tindak Pidana Pencucian Uang dalam Perspektif Hukum Positif Indonesia," *Media Hukum Indonesia (MHI)* 3, no. 1 (2025): 467.

[108] Purwoto, "Efforts to Prevent Criminal Acts of Money Laundering Using Penal Policy Measures," *Indian Journal of Forensic Medicine & Toxicology* 14, no. 4 (2020): 35.

[109] Prijo Santoso, and Bambang Pujiono, "The Jurisdiction of the Prosecutor's Office is to Confiscate Assets and Eradicate the Crime of Money Laundering," *Jurnal Multidisiplin Madani,* 4, no. 1 (2024): 183.

regime because it ensures that criminal assets can be secured even if the perpetrator tries to hide them through various means.[110]

Blockchain serves to support asset recovery approaches by providing greater transparency and efficiency in asset tracking and seizure, enabling faster legal proceedings and reducing abuse of power.[111] Blockchain helps balance deterrence, remediation, and retribution in the criminal justice system.[112]

4. Conclusion

The purpose of punishment is an effort to overcome various forms of damage that arise in society, both individual and social damages. In the case of money laundering, the provision of physical punishment in the form of suffering for the perpetrator (corporal punishment) is designed to overcome social damages arising from the actions of the perpetrator. This corporal punishment also serves as an instrument of protection for the community while upholding justice. Forfeiture of the proceeds of crime is based on a court decision that finds the offender guilty, thus confirming that the proceeds of crime are an integral part of the criminal act committed.

An approach that integrates asset recovery and corporal punishment creates a balance in law enforcement by emphasizing comprehensive justice for the community and the offender. The process of confiscating an offender's property serves not only to recover the losses caused by the crime, but also as a measure to ensure that the offender does not benefit from the crime committed. In this regard, blockchain can strengthen the asset recovery process by providing transparency and efficiency in tracking the flow of assets related to criminal offenses, preventing the transfer or concealment of assets by offenders.

Corporal punishment has an important function as a form of direct accountability for violations of the law and their impact on social order. It also prevents impunity that can undermine public trust in the legal system. Blockchain, with its ability to record transactions permanently and immutably, can ensure that asset seizures are carried out in accordance with valid court decisions, reducing the potential for abuse of power by law enforcement officials.

In this framework, the integration of asset recovery and corporal punishment is a solution that not only focuses on recovering material losses, but also ensures

[110] Garda T. Paripurna, and M. Natsir Kongah, *Rezim Anti Pencucian Uang Indonesia: Perjalanan 5 Tahun. PPATK*, Jakarta: Pustaka Juanda Tiga Lima, 2007.

[111] Jain et al., "Blockchain-Based Criminal," 7.

[112] Dewi Asri Puanandini et al., "Strategi pencegahan dan penanggulangan tindak pidana pencucian uang dalam perspektif hukum dan kebijakan nasional," *Public Sphere: Jurnal Sosial Politik, Pemerintahan dan Hukum* 3, no. 2 (2024): 378.

that the legal process provides a deterrent effect for perpetrators and maintains a sense of public justice. By utilizing technology such as blockchain, the legal system can work more transparently, efficiently, and accountably, thus creating greater trust among the public in the legal process carried out.

5. Acknowledgement

The authors would like to thank Universitas Prasetiya Mulya and Universitas Harapan Bangsa for supporting this research. Thanks also go to the anonymous reviewers and editors who have provided constructive feedback so that this manuscript is suitable for reading and citation.

Declarations:

Author contribution: Author 1 initiated the research idea, developed the instruments, and conducted the analysis. Author 2 handles data collection and drafts the paper. Author 3, as an information technology expert, refined the analysis method, especially in the section on Blockchain technology.

Funding statement:

The authors received no direct funding for this research.

Conflict of interest:

The authors declare no conflict of interest.

Additional information:

No additional information is available for this paper.

References

Abidin, RB Muhammad Zainal, Mahendra Suhartono, and Idham Halik Nussy. "Disoriented Law Enforcement Against Corporations Commit Money Laundering." *Jurnal Hukum dan Kenotariatan* 7, no. 2 (2023): 78-93.

Aglia, Arla, Moch Panji Agung Saputra, and Setyo Okta Yohandoko. "The Role of Pancasila as a Political Ethical System: Understanding Indonesia's Ideological Foundation and Moral Guidance." *International Journal of Humanities, Law, and Politics*, 2, no. 3 (2024), 45–98.

Agrawal, Ankur, Swati Bansal, Monica Agarwal, Reema Agarwal, and Mohammad Rumzi Tausif. "Transformation of Asset Management Systems Through Blockchain." In *Utilizing Blockchain Technologies in Manufacturing and Logistics Management*. Pennsylvania: IGI Global Scientific Publishing, 2022.

Akinrotimi, Akinyemi Omololu. "Legal ramifications of blockchain technology." In *Decentralised Internet of Things: A Blockchain Perspective*, pp. 217-230. Cham: Springer International Publishing, 2020.

Alexander, Kern. "The international anti-money-laundering regime: the role of the financial action task force." *Journal of Money Laundering Control* 4, no. 3 (2001): 231-248.

Alipour, Hassan. "Money Laundry as a Threat to National Security." *Strategic Studies Quarterly* 9, no. 32 (2006): 355-395.

Al-Tawil, Tareq Na'el. "Anti-money laundering regulation of cryptocurrency: UAE and global approaches." *Journal of Money Laundering Control* 26, no. 6 (2023): 1150-1164.

Amien, Miska. "Causa Materialis Pancasila Menurut Notonagoro." *Jurnal Filsafat* 16, no. 1 (2006): 18-26.

Andenaes, Johannes. "General prevention revisited: Research and policy implications." *The Journal of Criminal Law and Criminology* (1973-) 66, no. 3 (1975): 338-365.

Apriani, Karlina Lina, Ahmad Raji Hidayat, Rato Eko Hendriyadi, Wahyu Hamdani, and Surawijaya Surawijaya. "Criminal Law Politics: Corruption Eradication Strategy Through an Integrative Approach." *Unram Law Review* 4, no. 1 (2020): 33-39.

AS Mendrofa, Melky. "Legal Study of Asset Confidentiality Without Punishment as An Alternative for Providing Justice for the State and Persons of Corruption." *International Journal of Law and Society* 1, no. 2 (2024): 44–55.

Awasthi, Vimal. "Blockchain Revolution in Asset Management: A Comprehensive Analysis and Implementation Framework." *Interantional Journal of Scientific Research in Engineering and Management*, 8, no. 5 (2024): 1–5.

Azmi, Ilima Fitri, and Alih Aji Nugroho. "Anti-corruption system 4.0: The adoption of blockchain technology in the public sector." *Integritas: Jurnal Antikorupsi* 9, no. 1 (2023): 93-108.

Balakrishnan, Anandaganesh, Varun Jain, Pradeep Chintale, Sivanagaraju Gadiparthi, and Madhavi Najana. "Blockchain Empowerment in Sanctions and AML Compliance: A Transparent Approach." *International Journal of Computer Trends and Technology 72* no. 5 (2024): 11-26.

Basaran-Brooks, Bahriye. "Money laundering and financial stability: does adverse publicity matter?." *Journal of Financial Regulation and Compliance* 30, no. 2 (2022): 196-214.

Bjelajac, Zeljko, and Momcilo B. Bajac. "Blockchain technology and money laundering." *Law Theory & Prac.* 39, no. 3 (2022): 21-56.

Boonin, David. *The problem of punishment*. Cambridge: Cambridge University Press, 2008.

Boong, Vicariya Retnowati, Joshua Evandeo Irawan, Christian Ibrahim, and Steven Jonathan. "Asset Return in Money Laundering." *Corruptio* 4, no. 2 (2023): 127-136.

Caruso, Gregg D. "Justice without retribution: An epistemic argument against retributive criminal punishment." *Neuroethics* 13, no. 1 (2020): 13-28.

Chandra, Tofik Yanuar, Mohammad Belayet Hossain, Mohd Zakhiri Md Nor, and Mohammad Abu Taher. "Economic Opportunities of Offshore Banking and Regulatory Responses to Money Laundering Risks: A Comparative Study." *Jurnal Hukum* 40, no. 2: 153-173.

Charles, Iwan Roy. "Analysis of Article 69 of Law Number 8 of 2010 concerning Prevention and Eradication of the Crime of Money Laundering in the Perspective of Legal Certainty." *Melayunesia Law* 6: 59-84.

Cherednichenko, Olga, Iryna Kyrychenko, Glib Tereshchenko, Denys Miand, and Serhii Pylypenko. "Comparison of Blockchain-Based Data Storage Systems." In *COLINS (3)*, pp. 134-144. 2024.

de Caria, Riccardo. "Blockchain-based money as the ultimate challenge to sovereignty: Reflections from a public economic law perspective." *European Journal of Comparative Law and Governance* 6, no. 2 (2019): 131-145.

De Keijser, J. W. *Punishment and Purpose: From Moral Theory to Punishment in Action, dissertatie*. Leiden: Eigen beheer (2000).

Dyntu, Valeriia, and Oleh Dykyi. "Cryptocurrency in the system of money laundering." *Baltic Journal of Economic Studies* 4, no. 5 (2018): 75-81.

Fauzia, Ana, and Fathul Hamdani. "Analysis of the implementation of the non-conviction-based concept in the practice of asset recovery of money laundering criminal act in Indonesia from the perspective of presumption of innocence." *Jurnal Jurisprudence* 11, no. 1 (2022): 57-67.

Feltovic, Milan. "Utilizing Blockchain Technology to Modernize Police Operations: Ensuring Security, Transparency, and Efficiency." *Eximia* 13 (2024): 661-672.

Flora, Henny Saida, Maidin Gultom, Parulian Samosir, Khomaini Khomaini, and Bobur Sobirov. "The Urgency of Restorative Justice in Renewing Criminal Law." *Jurnal Hukum* 40, no. 2 (2024): 75-87.

George, E. P. E., C. Idemudia, and A. B. Ige. "Blockchain technology in financial services: enhancing security, transparency, and efficiency in transactions and services." *Open Access Res J Multidiscip Stud* 8, no. 1 (2024): 26-35.

Gikonyo, Constance. "Criminal Forfeiture under Kenya's Proceeds of Crime and Anti-Money Laundering Act: Nature and Challenges." *African Journal of International and Comparative Law* 28, no. 4 (2020): 657-676.

Goldbarsht, Doron. "Adapting confiscation and anti-money laundering laws to the digital economy: exploring the Australian interplay between proceeds and technology." *Journal of Money Laundering Control* 27, no. 3 (2024): 472-488.

Grupp, Stanley E., ed. *Theories of punishment*. Bloomington, IN: Indiana University Press, 1971.

Gump, Akin, and Christopher Leonard. "Blockchain:: regulating the future of finance." *International financial law review* 35, no. 13 (2016): 1.

Hamzah, Andi. *Sistem Pidana dan Pemidanaan Indonesia dari retribusi ke reformasi*. Jakarta: Pradnya Paramita, 1986.

Handayani, Sri Lestari. "Assets Recovery of Money Laundering Criminal Acts: A Study of Restoring Assets for Money laundring Criminal Acts Related in the Account of Overseas Bank." *International Journal of Social Science and Human Research*, 4, no. 7 (2021): 35-43.

Haris, B. S. "Added value and challenges of the follow-the-money approach in environmental crimes. AML." *CFT Journal: The Journal of Anti Money Laundering and Countering The Financing of Terrorism* 2, no. 2 (2024): 111-125.

Harding, Christopher, and Richard W. Ireland. *Punishment: Rhetoric, rule, and practice*. Oxfordshire: Routledge, 2022.

He, Ping. "A typological study on money laundering." *Journal of Money Laundering Control* 13, no. 1 (2010): 15-32.

Hidayah, Fenty Nur, Marchanida Firly Nabila, Magdalena Triyas Maharani, and Anggra Prayundhika Herani. "Analisis Yuridis Terhadap Kasus Pencucian Uang (Money Laundering): Perspektif Hukum Perbankan Indonesia." *JOURNAL SAINS STUDENT RESEARCH* 3, no. 1 (2025): 143-154.

Hryniewicz-Lach, Elżbieta. "Improving asset confiscation: in the quest for effective and just solutions." In *ERA Forum*. 25, no. 2, (2024): 231-247.

Ilato, Fadel, Abdul Majid, and Setiawan Noerdajasakti. "Criminal Action Without Proven in Money Laundering in Indonesia." *Jambura Law Review* 3 (2021): 180-197.

Jain, Aastha, Soumyajit Das, Anand Singh Kushwah, Tushar Rajora, and Shagun Saboo. "Blockchain-Based Criminal Record Database Management." In *2021 Asian Conference on Innovation in Technology (ASIANCON)*. New York City: IEEE, 2021.

Jannah, Rohmatul, Kania Putri Riyandra, Najwa Aulia Widyaningrum, and Athalla Fikra Yazdaniar. "Efektivitas Mekanisme Pencegahan dan Pemberantasan Tindak Pidana Pencucian Uang

dalam Perspektif Hukum Positif Indonesia." *Media Hukum Indonesia (MHI)* 3, no. 1 (2025): 456-485.

Joeroy, Jeane N. Sally, and Wiratno Wiratno. "Implementation of Follow the Money in Eradicating Corruption and Money Laundering." *International Journal of Social Health* 2, no. 5 (2023): 249-264.

Joshi, Shashank, and Arhan Choudhury. "Tokenization of real estate assets using blockchain." *International Journal of Intelligent Information Technologies (IJIIT)* 18, no. 3 (2022): 1-12.

Kant, Immanuel. *Philosophy of Law*. Cambridge: Cambridge University Press, 1797.

Koutsoupia, Victoria. "Challenges of the Use of Virtual Assets in Money Laundering." *Nordic Journal of European Law* 6, no. 4 (2023): 53-78.

Kumar, Birla Naveen, K. Sriram Siddartha, and M. Harshitha Reddy. "An Implementation of Blockchain Technology in Forensic Evidence Management." *Sriram and Reddy, M. Harshitha, An Implementation of Blockchain Technology in Forensic Evidence Management (January 01, 2025)* (2025).

Kumar, Dinesh, Sunil Kumar, and Akashdeep Joshi. "Assessing the viability of blockchain technology for enhancing court operations." *International Journal of Law and Management* 65, no. 5 (2023): 425-439.

Kurniawan, Lendra Dika, Alfin Dwi Rahmawan, and Jeanne Darc Noviayanti Manik. "Kajian Kriminologi Terhadap Pengunaan Mata Uang Kripto Sebagai Media Pencucian Uang." *Jurnal Suara Hukum* 5, no. 1 (2023): 89-101.

Lasmadi, Sahuri, Usman Usman, Elly Sudarti, and Nys Arfa. "Asset Seizure of Money Laundering Crimes Arising from Corruption in the Perspective of Legal Certainty and Justice." *Pandecta Research Law Journal* 18, no. 2 (2023): 352-374.

Levi, Michael. "Money laundering and its regulation." *The Annals of the American Academy of Political and Social Science* 582, no. 1 (2002): 181-194.

Littewina, Mutiara, Andry Alamsyah, Eva Nurhazizah, and Tanti Ruwani. "Land Certificate Authenticity Using Blockchain Technology in Indonesia." In *2024 12th International Conference on Information and Communication Technology (ICoICT)*. New York City: IEEE, 2024.

Mamulak, N. M. R., M. Miswadi, J. Julinaldi, R. Komarudin, and M. Syahputra. "Blockchain Technology: Unlocking New Frontiers in Data Management and Transparency." *Global International Journal of Innovative Research* 2, no. 9 (2024): 2257-2270.

Manik, Md Motaleb Hossen, Anite Halim Sagor, Md Ahsan Habib, Md Mossadek Touhid, Tanim Ahmed, Md Zabirul Islam, and Fabliha Haque. "Redefining crime record storage: An advanced architecture harnessing the power of blockchain technology." In *2023 26th International Conference on Computer and Information Technology (ICCIT)*. New York City: IEEE, 2023.

Maulidah, Khilmatin, and Ratna Kumala Sari. "The Urgency of the Follow the Money Approach in Law Enforcement Efforts Against Money Laundering Resulting from Corruption." *Sapientia Et Virtus* 9, no. 2 (2024): 446-460.

McCarthy, Killian J., Peter van Santen, and Ingo Fiedler. "Modeling the money launderer: Microtheoretical arguments on anti-money laundering policy." *International Review of Law and Economics* 43 (2015): 148-155.

Meiryani, Sani Muhamad Isa, and Johan Muliadi Kerta. "Money laundering in corruption cases in Indonesia." *Journal of Money Laundering Control* 27, no. 1 (2024): 127-138.

Muchtar, Musdayanti, Abd Asis, and Audyna Mayasari Muin. "Proving of Predicate Crimes in Cases of Money Laundering Crimes." *Alauddin Law Development Journal* 5, no. 2 (2023): 410-416.

Muladi, Arief, and Barda Nawawi. *Teori-teori dan kebijakan Pidana*. Bandung: Penerbit Alumni, 1998.

Muladi, Barda Nawawi Arief. *Teori-teori dan Kebijakan Pidana*, Bandung: Bandung, PT. 2010.

Muladi. *Lembaga Pidana Bersyarat (3rd ed.)*. Bandung: Alumni, 2004.

Mulyati, Nani, and Aria Zurnetti. "Asset Recovery as a Fundamental Principal in Law Enforcement of Corruption by Corporations." *Andalas International Journal of Socio-Humanities* 4, no. 1 (2022): 51-60.

Nanda Hutama, Wisnu, and Dewi Gunawati. "Implementation of the Confiscation and Auction of Assets Convicted in the Jiwasraya Corruption Case to Recover State Losses." *International Journal of Multicultural and Multireligious Understanding*, 11, no. 5 (2024): 470.

Nawawi, Muladidan Barda. "Teori-teori dan kebijakan pidana." *Bandung: Alumni* (1992).

Notonagoro, Pembukaan Undang-Undang Dasar. "dalam Pancasila Dasar Falsafah Negara." *Cetakan Ketujuh, Jakarta: Bina Aksara* (1988).

Oad, Ammar, Abdul Razaque, Askar Tolemyssov, Munif Alotaibi, Bandar Alotaibi, and Chenglin Zhao. "Blockchain-enabled transaction scanning method for money laundering detection." *Electronics* 10, no. 15 (2021): 1766.

Olatoye, Funmilola Olatundun, Oluwafunmi Adijat Elufioye, Chinwe Chinazo Okoye, E. E. Nwankwo, and J. O. Oladapo. "Blockchain in asset management: An extensive review of opportunities and challenges." *International Journal of Science and Research Archive* 11, no. 1 (2024): 2111-2119.

Packer, Herbert. *The limits of the criminal sanction*. Califronia: Stanford university press, 1968.

Pompe, Sebastian. *Iktisar Ketentuan Pencegahan Dan Pemberantasan Tindak Pidana Pencucian Uang*. Jakarta: NLRP, 2011.

Pompe, Willem Petrus Joseph. *Handboek van het Nederlandse strafrecht*. Apeldoorn: Tjeenk Willink, 1959.

Puanandini, Dewi Asri, Halena Taufiqurrahmawati, and Ahmad Fauzy Nurazmy Azhari. "Strategi pencegahan dan penanggulangan tindak pidana pencucian uang dalam perspektif hukum dan kebijakan nasional." *Public Sphere: Jurnal Sosial Politik, Pemerintahan dan Hukum* 3, no. 2 (2024): 356-379.

Purwanto, Hery, and Siti Ummu Adillah. "The Recovery of Assets Results of Corruption Through Additional Criminal Payment of Replacement Money." *Law Development Journal* 3, no. 2 (2021): 261-271.

Purwoto, Purwoto. "Efforts to Prevent Criminal Acts of Money Laundering Using Penal Policy Measures." *Indian Journal of Forensic Medicine & Toxicology* 14, no. 4 (2020).

Riswanto, Riswanto, Muhammad Akbar Rachmatullah, Alip Rahman, and Diky Dikrurahman. "Legal Aspects In Handling Money Laundering Cases In Indonesia." *Asian Journal of Social and Humanities* 2, no. 8 (2024): 1818-1823.

Robinson, Paul H. "A Truce in Criminal Law's Distributive Principal Wars." *New Criminal Law Review* 23, no. 4 (2020): 565-583.

Rossi, Pellegrino. *Traité de droit pénal*. Américaine: Société typographique belge, 1843.

Rusianto, Rusianto, Rommy Hardyansah, and Didit Darmawan. "Application of the Elements of Money Laundering Crime in Indonesian Jurisprudence." *Bulletin of Science, Technology and Society* 2, no. 3 (2023): 44-50.

Saleh, Roeslan. *Beberapa asas-asas hukum pidana dalam perspektif*. Jakarta : Aksara Baru, 1981.

Saleh, Roeslan. *Suatu Reorientasi dalam Hukum Pidana*. Jakarta: Aksara Baru, 1978.

Sam, Yolanda Adelia Bella Lestari, Messy Rachel Mariana Hutapea, and Suyudi Setiawan. "Legalitas Cryptocurrency Dalam Tindak Pidana Kejahatan Pencucian Uang." *DiH: Jurnal Ilmu Hukum* 3, no. 4 (2022): 108-120.

Samosir, C. Djisman. *Fungsi pidana penjara dalam sistem pemidanaan di Indonesia*. Jakarta: Binacipta, 1992.

Santoso, Prijo and Bambang Pujiono. "The Jurisdiction of the Prosecutor's Office is to Confiscate Assets and Eradicate the Crime of Money Laundering." *Jurnal Multidisiplin Madani,* 4, no. 1 (2024): 180–185.

Sari, Nani Widya, Henny Nuraeny, Oksidelfa Yanto, Guntarto Widodo, and Bhanus Prakash Nunna. "Relationship Between Money Laundering Crime and Corruption Crime as Originate Crime from the Criminal Perspective." *International Journal of Integrative Sciences* 2, no. 3 (2023): 73-92.

Setiawan, Andrie Wahyu, M. Fakih, Ahmad Irzal Fardiansyah, and H. S. Tisnanta. "Problematics of Execution of Assets of Convictions in Efforts Recovery of State Losses." *Sch Int J Law Crime Justice* 7, no. 2 (2024): 91-96.

Sherimon, P. C., Vinu Sherimon, Jeff Thomas, and Kevin Jaimon. "A Blockchain Framework for Investment Authorities to Manage Assets and Funds." In *International Conference on Big Data Innovation for Sustainable Cognitive Computing*, pp. 217-226. Cham: Springer Nature Switzerland, 2022.

Sicignano, Gaspare Jucan. "Money laundering using cryptocurrency: the case of bitcoin!." *Athens JL* 7, no. 4 (2021): 253-279.

Sitompul, Ariman, and Aisyah Aisyah. "Fair Law in Money Laundering with the Origin of Corruption with the Concept of Asset Seizure." *International Asia of Law and Money Laundering (IAML)* 3, no. 3 (2024): 156-162.

Sittlington, Samuel, and Jackie Harvey. "Prevention of money laundering and the role of asset recovery." *Crime, Law and Social Change* 70, no. 4 (2018): 421-441.

Soenmandjaja SD, Tb., Hono Sejati, and Lamijan Lamijan. "Law Enforcement of Digital Asset Confiscation in Money Laundering Crimes." *Jurnal Ekonomi Teknologi dan Bisnis (JETBIS)* 3, no. 8 (2024): 1034-1043.

Sproat, Peter A. "To what extent is the UK's anti-money laundering and asset recovery regime used against organised crime?." *Journal of Money Laundering Control* 12, no. 2 (2009): 134-150.

Sun, Yujing, Hao Xiong, Siu Ming Yiu, and Kwok Yan Lam. "Bitanalysis: A visualization system for bitcoin wallet investigation." *IEEE Transactions on Big Data* 9, no. 2 (2022): 621-636.

Suwitra, I. Ketut, Alwan Hadiyanto, and Ciptono Ciptono. "Pencegahan Tindak Pidana Pencucian Uang Melalui Lintas Internasional Dalam Perspektif Undang-Undang Tindak Pidana Pencucian Uang." *Jurnal USM Law Review* 7, no. 2 (2024): 960-973.

T. Paripurna, Garda, and M. Natsir Kongah. *Rezim Anti Pencucian Uang Indonesia: Perjalanan 5 Tahun. PPATK*. Jakarta: Pustaka Juanda Tiga Lima, 2007.

Talha, Muhammad. "Blockchain in Accounting: Transforming Transparency and Security in Financial Records." *Dandao Xuebao/Journal of Ballistics* 36, no. 1 (2024): 63-73.

Taufiq, Abigail Ahmad, Riska Andi Fitriono, Nabilla Yogy Irawan, Anisa Fisa Bilhillah. "Pancasila as a Political Ethic." *International Journal of Religion Education and Law* 1, no. 2 (2022): 111-115.

Usman Kemal, Muhammad. "Anti-money laundering regulations and its effectiveness." *Journal of Money Laundering Control* 17, no. 4 (2014): 416-427.

Van Veen, Vincent, and Cameron S. Carter. "The anterior cingulate as a conflict monitor: fMRI and ERP studies." *Physiology & behavior* 77, no. 4-5 (2002): 477-482.

Vemuri, Vijay K. "Blockchain: a practical guide to developing business, law, and technology solutions." (2018): 161-163.

Wardani, Andhira, Mahrus Ali, and Jaco Barkhuizen. "Money laundering through cryptocurrency and its arrangements in money laundering act." *Lex Publica* 9, no. 2 (2022): 49-66.

Wu, Jiajing, Dan Lin, Qishuang Fu, Shuo Yang, Ting Chen, Zibin Zheng, and Bowen Song. "Toward understanding asset flows in crypto money laundering through the lenses of Ethereum heists." *IEEE Transactions on Information Forensics and Security* 19 (2023): 1994-2009.

Zhou, Fangfang, Yunpeng Chen, Chunyao Zhu, Lijia Jiang, Xincheng Liao, Zengsheng Zhong, Xiaohui Chen, Yi Chen, and Ying Zhao. "Visual analysis of money laundering in cryptocurrency exchange." *IEEE Transactions on Computational Social Systems* 11, no. 1 (2023): 731-745.