

Regulating Beneficial Ownership: Unveiling Hidden Assets from Illicit Financial Flows via Cryptocurrency Exchanges in Indonesia

Regulando la titularidad real: desvelando activos ocultos de flujos financieros ilícitos mediante intercambios de criptomonedas en Indonesia

Ika Riswanti Putranti

Associate Professor, Universitas Diponegoro

Semarang, Indonesia

ikariswantiputranti@lecturer.undip.ac.id

<https://orcid.org/0000-0001-8992-5242>

Reni Windiani

Assistan Professor, Universitas Diponegoro

Indonesia

reniwindiani@lecturer.undip.ac.id

<https://orcid.org/0009-0006-0760-970X>

Artículo de investigación

<https://doi.org/10.32719/26312484.2026.45.3>

Fecha de recepción: 30 de junio de 2025

Fecha de revisión: 29 de agosto de 2025

Fecha de aceptación: 4 de septiembre de 2025

Fecha de publicación: 5 de enero de 2026

Licencia Creative Commons



ABSTRACT

This article investigates Indonesia's regulatory challenges and opportunities, such as tracing and recovering assets derived from corruption and laundering them through cryptocurrency, specifically via cryptocurrency exchanges. Cryptocurrency exchange platforms typically implement Know Your Customer and Anti-Money Laundering measures; this study reveals how corrupt actors exploit loopholes in identity verification and transaction monitoring using nominee structures and complex layering schemes. Building upon Indonesia's evolving anti-corruption and Anti Money Laundering legal framework—from the early emergency laws to the establishment of the Corruption Eradication Commission and the Financial Transaction Reports and Analysis Center, culminating in Law n.º 8/2010 of the Republic of Indonesia and the Presidential Regulation on beneficial ownership—the paper critically analyzes the effectiveness of current mechanisms for identifying and disclosing ultimate beneficial owners in crypto-related transactions. This article highlights the vulnerability of cryptocurrency exchanges in facilitating asset concealment under the guise of legitimacy. This article recommends enhanced regulatory alignment, increased transparency in beneficial ownership registries, and institutional capacity building to ensure more effective detection, deterrence, and recovery of illicit assets flowing through cryptocurrency exchanges.

KEYWORDS: Beneficial Ownership, Anti Money Laundering, Cryptocurrency Exchange, Decentralized Exchange, Centralized Exchange, Crypto Laundering, Illicit Financial Flows, Anti-corruption.

RESUMEN

Este artículo investiga los desafíos y oportunidades regulatorias de Indonesia, como el rastreo y la recuperación de activos derivados de la corrupción y su lavado a través de criptomonedas, específicamente a través de plataformas de intercambio de criptomonedas. Las plataformas de intercambio de criptomonedas generalmente implementan medidas de Conozca a su Cliente y Antilavado de Dinero; este estudio revela cómo los actores corruptos explotan las lagunas en la verificación de identidad y el monitoreo de transacciones utilizando estructuras de nominados y complejos esquemas de estratificación. Con base en el cambiante marco legal anticorrupción y antilavado de dinero de Indonesia, desde las primeras leyes de emergencia hasta el establecimiento de la Comisión para la Erradicación de la Corrupción y el Centro de Informes y Análisis de Transacciones Financieras, que culminó con la Ley n.º 8/2010 de la República de Indonesia

y el Reglamento Presidencial sobre la titularidad real, el documento analiza críticamente la efectividad de los mecanismos actuales para identificar y revelar a los beneficiarios finales en transacciones relacionadas con criptomonedas. Este artículo destaca la vulnerabilidad de las plataformas de intercambio de criptomonedas al facilitar la ocultación de activos bajo el disfraz de la legitimidad. En este artículo se recomienda mejorar la alineación regulatoria, aumentar la transparencia en los registros de propietarios reales y desarrollar la capacidad institucional para garantizar una detección, disuasión y recuperación más efectiva de los activos ilícitos que fluyen a través de los intercambios de criptomonedas.

PALABRAS CLAVE: Titularidad real, Prevención del lavado de dinero, Intercambio de criptomonedas, Intercambio descentralizado, Intercambio centralizado, Lavado de criptomonedas, Flujos financieros ilícitos, Lucha contra la corrupción.

FORO

INTRODUCTION

Illicit financial flows (IFFs) severely undermine the economic integrity of developing countries by diverting essential public resources through illegal, cross-border financial transactions. These include trade misinvoicing, tax evasion, money laundering through shell companies, and financing criminal activities. Global Financial Integrity (GFI) estimates that trade-related IFFs represent approximately 20 percent of total trade between developing and developed nations. The loss in public revenue from these practices hinders investments in infrastructure, education, health, and climate resilience, directly threatening progress toward the Sustainable Development Goals. The GFI advocates enhanced financial transparency, stronger anti-money laundering frameworks, and international cooperation to stem IFFs.¹

Benson, Turksen, and Adamyk show how criminals exploit decentralized technologies like cross-chain bridges, non-custodial wallets, and anonymous

1. Global Financial Integrity, “Illicit Financial Flows”, 2025, <https://gfintegrity.org/issue/illicit-financial-flows/>.

exchanges to bypass Anti-Money Laundering (AML) checks. The study calls for an enhanced, harmonized regulatory framework capable of closing blind spots in Decentralized Finance (DeFi), which is rapidly becoming a hotbed for laundering cryptocurrency proceeds. The integration of technology, such as blockchain analytics and regulatory sandboxes, is suggested to counterbalance DeFi's opacity without stifling innovation.²

Several articles emphasize the pivotal role of cryptocurrencies and blockchain technologies as enablers of financial anonymity and laundering, especially through decentralized systems, such as Bitcoin. Yin et al. (2019) develop a supervised machine learning model capable of de-anonymizing Bitcoin transactions, revealing that while cryptocurrency ecosystems offer a high degree of pseudonymity, technical methods now exist to classify entities and identify patterns of illicit activity with over 80% accuracy.³ Similarly, Europol's report highlights how cryptocurrencies, despite their decentralized advantages, have become central to money laundering operations, particularly because of their rapid transaction speed, cross-border mobility, and regulatory lags.⁴ Tropina illustrates how criminals exploit digital anonymity, decentralized networks, and unregulated platforms to launder money, engage in tax fraud, and fund terrorism. The use of botnets, darknet marketplaces, and cryptocurrencies creates an infrastructure for a digital underground economy where illegal profits are generated and moved across borders with minimal traceability. Tackling IFFs demands a synthesis of technical, legal, and ethical considerations, where international cooperation, regulatory foresight, and the strategic use of data-driven technologies are critical to their success.⁵

2. Vladlena Benson, Umut Turksen and Bogdan Adamyk, "Dark Side of Decentralised Finance: A Call for Enhanced AML Regulation Based on Use Cases of Illicit Activities", *Journal of Financial Regulation and Compliance* 32, n.º 1 (2024): 80-97, <https://doi.org/10.1108/JFRC-04-2023-0065>.
3. Hao Hua Sun Yin et al., "Regulating Cryptocurrencies: A Supervised Machine Learning Approach to De-Anonymizing the Bitcoin Blockchain", *Journal of Management Information Systems* 36, n.º 1 (2019): 37-73, <https://doi.org/10.1080/07421222.2018.1550550>.
4. Europol, "Cryptocurrencies: Tracing the Evolution of Criminal Finances", *Europo* (2021): 20, <https://www.europol.europa.eu/cms/sites/default/files/documents/Europol%20Spotlight%20-%20Cryptocurrencies%20-%20Tracing%20the%20evolution%20of%20criminal%20finances.pdf>.
5. Tatiana Tropina, "Big Data: Tackling Illicit Financial Flows", in *Big Data: A Twenty-First Century Arms Race* (Washington D.C.: Atlantic Council, 2017), 41-52, https://cdn.atlantic-council.org/wp-content/uploads/2017/06/Big_Data_A_Twenty-First_Century_Arms_Race_web_0627_Chapter_4.pdf.

From a governance and policy perspective, Kahler (2018) and Vittori (2018) stress the securitization of IFFs, where illicit flows are not only economic issues but also national and transnational security concerns. They critique the gap between policy rhetoric and enforcement capacity, pointing to donor-driven frameworks that often lack coherence with local capabilities.⁶ Teichmann and Falker demonstrated that the anonymity of cryptocurrencies and the lack of centralized oversight make them ideal for money laundering, terrorist financing, and corruption. Their study advocates for an international regulatory framework modeled on Liechtenstein's blockchain legislation to address these risks.⁷ Although the illicit share of crypto transactions is proportionally small, the volume and complexity are rising, compelling law enforcement and regulators to enhance compliance tools, such as Know Your Customer (KYC) and AML protocols.⁸

With the explosive growth in cryptocurrency valuations justifying illicit wealth, the United Nations Office on Drugs and Crime (UNODC) emphasizes the urgent need for international regulatory frameworks and oversight mechanisms to address these evolving threats.⁹ While cryptocurrencies offer cross-border, instantaneous, and low-cost transactions, these features are increasingly exploited by illicit actors to conceal the origins of criminal proceeds from them. Despite the transparency of blockchain technology, money laundering persists through complex tactics, including the use of mixers, gambling sites, decentralized exchanges (DEX), and centralized exchanges (CEX), referred to as conversion services in the layering stage of the laundering cycle. Chainalysis reports that from 2019 to 2024, nearly \$100 billion in crypto assets were transferred from known illicit wallets to these services, with 2022 marking a peak, largely due to sanctioned entities like Garantex. Importantly, while such laundering activity occurs on-chain and is thus traceable, detecting transactions linked to off-chain criminality requires the combination of blockchain data with off-chain intelligence. The integration of these tools allows investigators to proactively generate leads and gather concrete evidence of money-laundering.

6. Maya Forstater et al., "Council on Foreign Relations Report Part Author (s): Miles Kahler Countering Illicit Financial Flows: Expanding Agenda, Fragmented Governance", 2018, 0-11.
7. Fabian Teichmann and Marie-Christin Falker, "Cryptocurrencies and Financial Crime: Solutions from Liechtenstein", *Journal of Money Laundering Control* 24, n.º 4 (2020): 775-88, <https://doi.org/10.1108/jmlc-05-2020-0060>.
8. Europol, "Cryptocurrencies: Tracing the Evolution of Criminal Finances".
9. "United Nations Office on Drugs and Crime", accessed May 19, 2025, <https://www.unodc.org/>.

ring networks. The report emphasizes that expertise in cryptocurrency tracing should extend beyond specialized cyber units to all law enforcement sectors, given the growing mainstream use of cryptocurrencies in illicit finance.¹⁰

Money laundering via cryptocurrency exchanges is increasingly prevalent; however, existing legal frameworks have not been responsive in addressing this issue. Indonesia has experienced growth in cryptocurrency exchange users over the past four years. However, the modus operandi of money laundering using cryptocurrency has rapidly evolved. Targeting the recovery of state assets from corruption is one of the objectives of law enforcement agencies. Therefore, it is intriguing to examine how Indonesia regulates beneficial ownership and unveils hidden assets from illicit financial flows via cryptocurrency exchanges.

CRYPTOCURRENCY EXCHANGE

For years, cryptocurrency transactions have operated in unregulated realms and outside legal jurisdictions. Without laws specifically referring to crypto transactions, they can operate without regard to regulations typically aimed at more traditional financial institutions, such as banks.¹¹

A DEX serves as a facility for exchanging bitcoin without requiring users to compromise their privacy or custodianship in an exchange. DEX ensure user security through smart contracts. They offer access to exchanges without anti-money laundering procedures; hence, they do not collect valid user identities such as government-issued IDs, phone numbers, or addresses. The assets traded on DEX are diverse because newly introduced coins/tokens do not require verification processes to enter exchanges.¹² DEX operates on a peer-to-peer (P2P) online blockchain basis, enabling users to directly transact cryptocurrencies. DEX does not require users to undergo KYC procedures, nor does it act

10. “Crypto Crime Trends from Chainalysis”, 2024, <https://www.chainalysis.com/blog/2024-crypto-crime-report-introduction/>.
11. Tim Stobierski, “How Do AML Regulations Apply to Crypto Exchanges?”, 2022, <https://withpersona.com/blog/aml-crypto>.
12. Ehsan Yazdanparast, “CEX vs DEX: A Comprehensive Comparison of Features”, *Coinmonks*, 2021, <https://medium.com/coinmonks/cex-vs-dex-a-comprehensive-comparison-of-features-bb398d416d4f>.

as a custodian.¹³ DEX merely serves as a protocol that facilitates transactions.¹⁴ DEX differ from traditional exchanges in several ways. First, DEX do not act as intermediaries. It relies solely on smart contract technology and blockchain to execute transactions. Thus, DEX prioritize lower transaction costs compared to traditional exchanges.¹⁵ Second, DEX does not have Consequently, DEX does not store users' assets as custodians do. Users always retain control over their passwords and their assets. Third, DEX operates anonymously, eliminating the need for users to disclose their identities.

DEX offers transparency through blockchain analytics. All crypto-to-crypto swap transactions are recorded in blockchain smart contracts, facilitating the execution of the swap scheme.¹⁶ Various actors are involved in DEX: Developers, Liquidity providers, Users, and DEX Token Holders.¹⁷ Developers are teams responsible for DEX development and adding new features or tools. Liquidity providers function as Automated Market Maker (AMM) mechanisms used to match buy and sell orders. AMM processes involve price determination using mathematical equations. Because DEX lack centralized intermediaries to provide liquidity, third parties are utilized. These providers earn profits through DEX charging fees and native DEX tokens issued as rewards for supplying liquidity. Users utilize DEX for decentralized peer-to-peer virtual asset exchanges. Some DEX issue native tokens or native tokens to liquidity providers. These tokens enable participation in DEX management. Token holders are granted voting rights in DEX management schemes, with the voting weight influenced by the number of DEX tokens owned. Additionally, token holders may receive a portion of the trading fees and exchange tokens for specific DEX services. DEX's mission is to reduce transaction costs by allowing users to hold their assets and avoiding regulatory burdens. However, DEX incurs costs through the emergence of compensation for liquidity providers regarding "im-

13. Scorechain, "Are DEXs Widely Used to Launder Money and Finance Terrorism? Scorechain Report on the State of ML/TF through DEXs in 2020", *Researches and Statistics*, 2021, <https://www.scorechain.com/blog/are-dexs-widely-used-to-launder-money-and-finance-terrorism>.
14. Tim Stobierski, "Decentralized Exchanges (DEXs) & KYC", 2022, <https://withpersona.com/blog/decentralized-exchanges-and-kyc>.
15. Stobierski.
16. David Carlisle, "Money Laundering Through DEXs and Mixers", 2022, <https://www.elliptic.co/blog/money-laundering-through-dexs-and-mixers>.
17. Kristi Swartz, "Mapping Out How Decentralised Exchanges Can Be Regulated", 2021.

permanent loss” risks.¹⁸ Impermanent loss refers to continuous value changes unless an action is taken. It occurs when assets are withdrawn after a price change, resulting in permanent losses.

CEX function similarly to traditional banks, where users entrust their money for safekeeping. CEX acts as a third party between buyers and sellers by controlling the asset exchanges.¹⁹ CEX allows exchanges between fiat money and crypto, in addition to crypto-to-crypto exchanges. In contrast, DEX only facilitate crypto-to-crypto exchanges. CEX stores transaction histories in internal databases.²⁰ Regarding security, CEX lack anonymity owing to KYC and AML regulations, ensuring user asset security. CEX operates in a centralized manner, enabling faster transactions through internal asset and information exchange processes.²¹

As intermediaries between buyers and sellers, CEX aim to instil user trust through asset storage and liquidity provision. CEX serve as market makers by supplying liquidity tokens. CEX has advantages over DEX. First, CEX have more liquidity. Second, CEX has stronger rules that provide client assurance. Third, CEX has custodianship, allowing CEX users to store their assets in custody before exchanging them. Custodianship impacts users because they do not directly store their assets but deposit them with the custodian. If CEX users lose their account passwords, they can contact CEX to ensure asset safety and immediate access. One drawback of DEX is compliance-related, as some DEX systems tend to use decentralization systems to avoid compliance with existing regulations (anti-money laundering regimes), as seen in cases such as SUEX, Chatex, or BTC-e. DEX is merely a platform where legal subjects engaging in activities within DEX can originate from different legal systems. DEX trading volumes exploded throughout 2021, reaching record highs of over \$30 billion per month and reporting total trading volumes of over \$1 trillion throughout the year, according to The Block Research. Due to its enhanced liquidity, money launderers who use these platforms for large-scale money stacking are more

18. Benedit George, “Centralized Exchange (CEX) vs. Decentralized Exchange (DEX): What’s the Difference?”, 2022, available at www.coindesk.com/learn/centralized-exchange-cex-vs-decentralized-exchange-dex-whats-the-difference/.
19. Smart Valor, “Centralized vs. Decentralized Exchanges”, 2022, <https://smartvalor.com/en/news/cefi-defi>.
20. Coinbase, “What Is a DEX?”, 2022, <https://www.coinbase.com/learn/crypto-basics/what-is-a-dex>.
21. Ergo, “CEX vs DEX: What Are Differences? | Ergo Platform”, 2021.

likely to take advantage of DEX.²² DEX is considered advantageous compared to CEX because it is non-custodial and relatively secure against theft. In a DEX, the system operates solely as a software protocol, similar to a marketplace where crypto assets remain stored in each user's wallet.²³

THE ANTI-MONEY LAUNDERING LAW AND THE FINANCIAL INTELLIGENT UNIT

Law Number 8 of 2010 of the Republic of Indonesia on the Prevention and Eradication of Money Laundering, characterizes money laundering as any action that fulfills the criteria of a criminal offense, as stipulated by the law. A transaction is defined as any activity that generates rights and/or obligations or establishes a legal relationship between two or more parties. A financial transaction specifically pertains to activities involving the placement, withdrawal, transfer, payment, grant, donation, deposit, and/or exchange of a sum of money or other acts and/or activities related to monetary dealings.

The collective insights from the uploaded articles provide a detailed and multifaceted perspective on how cryptocurrencies and crypto assets are increasingly leveraged in money laundering schemes, especially in Indonesia. Mutiara et al. (2024) emphasize how the anonymity and borderless nature of crypto assets—enabled by the layered security of blockchain—challenge traditional mechanisms of asset tracing and recovery. Their case study on high-profile Indonesian offenders, such as Indra Kesuma and Doni Salmanan, reveals gaps in legal procedures and coordination between investigative and prosecutorial bodies. While cooperation with international bodies such as Interpol and Financial Intelligence Units (FIUs) is essential, the absence of clear regulations complicates asset seizure and recovery efforts.²⁴

Building on this, Putri et al. (2023) compared Indonesia's crypto regulation landscape to those of the United States and Germany, exposing stark disparities. While the U.S. and Germany impose stringent KYC, AML, and registration obligations for crypto service providers, Indonesia classifies crypto me-

22. Carlisle, "Money Laundering Through DEXs and Mixers".

23. Carlisle.

24. Febby Mutiara Nelson et al., "Cracking the Code: Investigating the Hunt for Crypto Assets in Money Laundering Cases in Indonesia", *Journal of Indonesian Legal Studies* 9, n.º 1 (2024): 89-130.

rely as an investment asset under The Commodity Futures Trading Regulatory Agency, leaving significant regulatory and enforcement gaps. The challenges of pseudonymity and decentralization remain largely unaddressed, making the cross-border identification of actors and financial tracing difficult.²⁵

Some articles highlight the increasing complexity of money laundering through cryptocurrencies in Indonesia, highlighting both regulatory gaps and emerging enforcement efforts. Fidri Sahri and Hidayati emphasize that cryptocurrency-facilitated laundering is deeply tied to corruption and cross-border financial crimes, using digital systems and anonymizing tools like Bitcoin wallets to conceal the origins of illicit assets. Their study underscores that existing legal mechanisms, such as Law n.º 8 of 2010 and the Information and Electronic Transactions Law, acknowledge digital evidence but fall short of adapting to the decentralized and anonymous nature of blockchain transactions.²⁶ Meanwhile, Sitompul delves into the dual nature of cryptocurrencies as both investment assets and tools for cyberlaundering. He identifies specific regulatory instruments, such as The Indonesian Commodity Futures Trading Regulatory Agency Regulation n.º 5 of 2019, which treats crypto assets as tradable commodities, while simultaneously noting the inadequacy of enforcement tools to trace and prevent laundering due to crypto's pseudonymity and lack of institutional oversight.²⁷

Alhakim and Tantimin advance the discussion by critically evaluating Indonesia's reluctance to grant cryptocurrencies legal tender status, arguing that such an ambivalent position contributes to regulatory loopholes in the country. They stress the need for Indonesia to adopt a more cohesive legal framework that not only acknowledges the volatility of crypto markets but also proactively responds to their criminal misuse. Their analysis reveals how comparative experiences and the use of blockchain traceability can strengthen AML regimes. Notably, they highlight the regulatory dialectic model and gaps

25. Tiara Putri et al., "Inadequate Cryptocurrency and Money Laundering Regulations in Indonesia (Comparative Law of US and Germany)", *Yustisia* 12, n.º 2 (2023): 129-52, <https://doi.org/10.20961/yustisia.v12i2.71835>.
26. Fidri Sahri, "Legal Action Withdrawal of Assets Proceeding from Corruption Money Laundering through Cryptocurrency", 2023, <https://doi.org/10.4108/eai.11-11-2023.2351302>.
27. Ariman Sitompul, "Cryptocurrency Based Money Laundering in Indonesia", *International Asia of Law and Money Laundering* 4, n.º 1 (2025): 7-12, <https://doi.org/10.59712/iaml.v4i1.113>.

in FIU monitoring, suggesting that cryptographic transparency could be an asset rather than an obstacle for law enforcement agencies.²⁸

In addressing asset confiscation, Mahdavika Arsy Mubarak and Ayu Izza Elvany critique Indonesia's criminal-based confiscation paradigm, which requires a conviction before assets can be seized. They argue for the urgent passage of the Asset Confiscation Bill to allow for non-conviction-based forfeiture (NCBF), especially relevant in laundering schemes using DEXs, where identifying perpetrators is difficult. Their doctrinal research highlights how the current Money Laundering Act does not account for the complexities of crypto transactions and recommends technical regulatory upgrades for asset recovery mechanisms, particularly when laundering involves nominee structures and international crypto exchanges.²⁹

FATF RECOMMENDATIONS 24 AND 25: LEGAL FRAMEWORK FOR TRANSPARENCY

The Financial Action Task Force (FATF) has significantly advanced the global agenda for transparency and beneficial ownership, particularly through Recommendations 24 and 25, which are aimed at mitigating the misuse of legal persons and legal arrangements in money laundering (ML), terrorist financing (TF), and other illicit activities. Recommendation 24 focuses on legal persons and requires countries to ensure that accurate, adequate, and up-to-date beneficial ownership information is available to competent authorities in a timely manner. Recommendation 25 targets legal arrangements, particularly express trusts and analogous structures, mandating similar transparency obligations. These recommendations respond to persistent vulnerabilities, whereby criminals obscure ownership through layered structures, shell companies, nominee arrangements, and opaque legal vehicles. The FATF guidance underlines a risk-based approach, urging jurisdictions to assess domestic and foreign legal persons for inherent ML/TF risks and adopt mitigation strategies such as central

28. Abdurrahman Alhakim and Tantimin, "The Legal Status of Cryptocurrency and Its Implications for Money Laundering in Indonesia", *Padjadjaran Jurnal Ilmu Hukum* 11, n.º 2 (2024): 231-53, <https://doi.org/10.22304/pjih.v11n2.a4>.

29. Contemporary Issues and I N Criminal, "Confiscation of Assets Laundered through Cryptocurrency Transactions in Indonesia: A Regulatory Framework Mahdavika Arsy Mubarak * Fakultas Hukum Universitas Islam Indonesia, Yogyakarta, Indonesia, Ayu Izza Elvany Fakultas Hukum Universitas Islam Indo" 1 (2024): 37-62.

registries, robust verification mechanisms, and stringent controls over bearer shares and nominee arrangements.³⁰

The 2023 updated guidance on legal persons underscores the necessity for jurisdictions to not only mandate the disclosure of BO data but also to ensure that it is actively verified and regularly updated. Crucially, the approach must address both domestic and foreign entities with sufficient links to the jurisdiction, highlighting the global dimension of ownership concealment. This aligns with broader FATF standards that encourage transparency across jurisdictions, especially given the challenges posed by multi-layered, cross-border ownership structures.³¹ Recommendations 24 and 25 are not isolated provisions but part of an interlocking system intended to fortify the integrity of the global financial architecture. However, implementation challenges remain, especially in jurisdictions with weak governance or insufficient legal frameworks. However, the 2022–2024 revisions represent a significant step toward universal and beneficial ownership transparency.³²

REGULATING BENEFICIAL OWNERSHIP

The importance of beneficial ownership transparency is emphasized in various global contexts and sectors. Ádám Földes et al. argue that the lack of beneficial ownership transparency enables a wide range of illicit activities, including money laundering, corruption, and terrorism. While legal persons serve important economic purposes, they can be exploited to hide the identities of the true owners.³³ Jenik Radon and Mahima Achuthan link the lack of beneficial

30. FATF (2024). *Beneficial Ownership and Transparency of Legal Arrangements*; FATF (2023). *Beneficial Ownership of Legal Persons*; FATF (2014). *Transparency and Beneficial Ownership*; FATF (2012, updated 2023). *The FATF Recommendations: International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation*.
31. FATF (2024). *Beneficial Ownership and Transparency of Legal Arrangements*; FATF (2023). *Beneficial Ownership of Legal Persons*; FATF (2014). *Transparency and Beneficial Ownership*; FATF (2012, updated 2023). *The FATF Recommendations: International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation*.
32. FATF (2024). *Beneficial Ownership and Transparency of Legal Arrangements*; FATF (2023). *Beneficial Ownership of Legal Persons*; FATF (2014). *Transparency and Beneficial Ownership*; FATF (2012, updated 2023). *The FATF Recommendations: International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation*.
33. Ádám Földes, Maggie Murphy, Maíra Martini and Deborah Unger, “Where Is Beneficial Ownership Relevant?”, *Transparency Internasional* (2017): 4-7, <http://www.jstor.com/stable/resrep20573.4>.

ownership transparency to the “resource curse,” showing how hidden ownership, exposed by the Panama Papers, results in lost mining revenues and undermines sustainable development.³⁴ Maíra Martini critiques the implementation of global standards by the FATF, pointing out that many countries, especially offshore financial centers, exploit vague requirements to avoid meaningful compliance.³⁵ In Brazil, Fabiano Angélico and Lígia Zagato reveal regulatory gaps in company registries and limited access to ownership data, despite recent mandates for tax authorities to collect this information.³⁶ Linda Ahunu outlines Ghana’s legal reforms, including amendments to its Companies Act and the creation of a central beneficial ownership register, which now mandates disclosure of politically exposed persons.³⁷ Mercy Buku emphasizes the global relevance of beneficial ownership transparency in fighting corruption and financial crime, calling for harmonized standards, accessible registries, and robust enforcement mechanisms.³⁸

The regulation of beneficial ownership (BO) in the context of cryptocurrency in Indonesia is formed through the integration of various regulations aimed at preventing money laundering practices resulting from corruption through crypto exchanges. This legal framework includes the supervision of corporate ownership structures, regulation of digital financial activities by the Financial Services Authority, and tax provisions on crypto asset transactions. Law Number 4 of 2023 of the Republic of Indonesia concerning the Development and Strengthening of the Financial Sector places crypto assets as part of digital financial assets that fall within the scope of the Financial Services Authority’s regulation and supervision. Article 6 letter e and Article 213 letter h explicitly state that the Financial Services Authority has the authority to regulate activities in the Financial Sector Technology Innovation sector, including activities

- 34. Jenik Radon and Mahima Achuthan, “Beneficial Ownership Disclosure: The Cure for the Panama Papers Ills”, *Journal of International Affairs Editorial Board* 70, n.º 2 (2017): 85-108, <https://www.jstor.org/stable/90012622>.
- 35. Maíra Martini, “The Weakest Links: The Consequences Of Non-Comprehensive Beneficial Ownership Standards”, *JSTOR* (2019): 23-5, <http://www.jstor.com/stable/resrep20536.6>.
- 36. Fabiano Angélico and Lígia Zagato, “Beneficial Ownership Transparency in Brazil”, *Transparency Internasional* (2017): 19, <http://www.jstor.com/stable/resrep20590.8>.
- 37. Linda Ahunu, “Ghana’s Beneficial Ownership Intervention”, *Africa Centre for Energy Policy*, 2018, 19-28, <https://www.jstor.org/stable/resrep31184.5>.
- 38. Mercy Buku, “Beneficial Ownership: Improving Financial Transparency to Combat Crime and Corruption”, *Global Center on Cooperative Security*, 2022, 2-14, <https://www.jstor.org/stable/resrep41528>.

related to crypto assets. Article 312 also emphasizes the transfer of authority to supervise crypto trading from The Commodity Futures Trading Regulatory Agency to the Financial Services Authority as part of the integration of the high-risk financial sector. This indicates that crypto asset trading is no longer in the realm of commodity trading alone but is viewed as a financial activity that must be subject to the principles of prudence, governance, and integrity of the financial system. Presidential Regulation Number 13 of 2018 of the Republic of Indonesia is the main pillar in defining and requiring corporations, including crypto exchange organizers, to determine and report beneficial owners.

Article 1, paragraph (2) of the Presidential Regulation Number 13 of 2018 states that a Beneficial Owner is an individual who has control or receives direct or indirect benefits from a corporation. Article 3 requires each corporation to determine at least one Beneficial Owner based on the criteria outlined in Articles 4 and 10, such as ownership of more than 25% of shares, voting rights, or controlling power. In addition, Articles 14 to 19 emphasize the application of the principle of recognizing Beneficial Owners through identification and verification, which must be carried out from the stage of establishing or licensing a corporation. In this context, crypto asset trading organizers who are legal entities in Indonesia are required to comply with this provision as part of the compliance procedure for the Know Your Beneficial Owner (KYBO) principle. Technical regulations regarding the implementation of crypto exchanges are outlined in Indonesia Financial Services Authority Regulation Number 27 of 2024 concerning the Implementation of Digital Financial Asset Trading Including Crypto Assets, which emphasizes the structure and obligations of organizers, including exchanges, traders, clearing institutions, wallet managers, and digital asset storage places. In Article 1, numbers 5 and 6, digital financial assets, including crypto, are recognized as digital representations of value that are not guaranteed by the central bank and can be transacted electronically using distributed ledger technology, such as blockchain. Furthermore, Article 3 requires every organizer to carry out trading activities regularly, fairly, transparently, and efficiently, and to apply the principles of governance, risk management, consumer protection, cybersecurity, and most importantly, efforts to prevent Money Laundering and Terrorism Financing. The implementation of these principles is closely related to the identification of beneficial owners because crypto exchanges are often a channel to hide the identity of the perpetrators and the flow of funds from the proceeds of crime.

Law Number 4 of 2023 of the Republic of Indonesia concerning the Development and Strengthening of the Financial Sector places crypto assets as part

of digital financial assets that fall within the scope of the Financial Services Authority's regulation and supervision. Article 6 letter e and Article 213 letter h explicitly state that the Financial Services Authority has the authority to regulate activities in the Financial Sector Technology Innovation sector, including activities related to crypto assets. Article 312 also emphasizes the transfer of authority to supervise crypto trading from The Commodity Futures Trading Regulatory Agency to the Financial Services Authority as part of the integration of the high-risk financial sector. This indicates that crypto asset trading is no longer in the realm of commodity trading alone but is viewed as a financial activity that must be subject to the principles of prudence, governance, and integrity of the financial system.

Presidential Regulation Number 13 of 2018 is the main pillar in defining and requiring corporations, including crypto exchange organizers, to determine and report beneficial owners. Article 1, paragraph (2) states that a Beneficial Owner is an individual who has control or receives direct or indirect benefits from a corporation. Article 3 requires each corporation to determine at least one Beneficial Owner based on the criteria outlined in Articles 4 and 10, such as ownership of more than 25% of shares, voting rights, or controlling power. In addition, Articles 14 to 19 emphasize the application of the principle of recognizing Beneficial Owners through identification and verification, which must be carried out from the stage of establishing or licensing a corporation. In this context, crypto asset trading organizers who are legal entities in Indonesia are required to comply with this provision as part of the compliance procedure for the KYBO principle.

Technical regulations regarding the implementation of crypto exchanges are outlined in Financial Services Authority Regulation Number 27 of 2024 concerning the Implementation of Digital Financial Asset Trading Including Crypto Assets, which emphasizes the structure and obligations of organizers, including exchanges, traders, clearing institutions, wallet managers, and digital asset storage places. In Article 1, numbers 5 and 6, digital financial assets, including crypto, are recognized as digital representations of value that are not guaranteed by the central bank and can be transacted electronically using distributed ledger technology, such as blockchain.

Furthermore, Article 3 requires every organizer to carry out trading activities regularly, fairly, transparently, and efficiently, and to apply the principles of governance, risk management, consumer protection, cybersecurity, and most importantly, efforts to prevent Money Laundering and Terrorism Financing.

The implementation of these principles is closely related to the identification of beneficial owners because crypto exchanges are often a channel to hide the identity of the perpetrators and the flow of funds from the proceeds of crime.

In general, a Beneficial Owner refers to any individual who owns assets, controls customer transactions, authorizes transactions, and/or exercises control through legal entities or agreements (Article 1(7)). Beneficial Owners represented by prospective customers will still be processed by Non-Bank Financial Institutions (NBFIs). These Beneficial Owners are not entitled to any facilitation, such as bypassing customer due diligence procedures. Therefore, NBFIs are obliged to conduct customer due diligence procedures on these Beneficial Owners similar to the procedures applied to prospective customers (Article 9). Any unlawful activities attempted by Beneficial Owners will be mitigated by NBFIs through verification. Beneficial Owners deemed and/or classified as having a high risk of money laundering practices and/or high risk related to Financing of Terrorism Activities will be subjected to stringent verification by NBFIs. In brief, these high-risk Beneficial Owners include Politically Exposed Persons or High-Risk Customers (Article 13(2a)).

Moving on to Politically Exposed Persons (PEPs), by definition, a Politically Exposed Person is an individual, whether Indonesian or foreign national, entrusted with holding or exercising public authority as a state executive, legislative, or judicial official, other officials whose functions and duties are related to state administration or state-owned enterprises, and/or individuals registered as members of political parties who influence party policies and operations (Article 1(9)). Concerning the risk of money laundering or financing of terrorism, Politically Exposed Persons share similarities with Beneficial Owners. This is because Politically Exposed Persons are classified based on their background, similar to Beneficial Owners. Corporations subject to regulation must determine the beneficial owner of the corporation through the application of the beneficial owner principle. In making such a determination, corporations are required to determine the category of beneficial owners in accordance with the information provided by the corporation to the competent authorities (Article 29).

From the fiscal side, the government has implemented Indonesian Ministry of Finance Regulation Number 68/PMK.03/2022 and Indonesian Ministry of Finance Regulation Number 69/PMK.03/2022 to ensure that crypto asset and financial technology transactions are subject to income tax (PPH) and value-added tax (PPN). This policy not only aims to increase state revenues but also serves as an instrument to track the circulation of digital funds, which can be

linked to BO data to detect potential money laundering. This provision complements the systemic function of BO in limiting the perpetrators 'scope of movement, who disguise assets resulting from corruption through the mechanism of purchasing, converting, and transferring crypto assets.

CRYPTO LAUNDERING AND CORRUPTION CASE IN INDONESIA

Handling corruption related to cryptocurrency can be said to be difficult considering that crypto exchanges are operated by individuals, private entities, or other independent institutions that do not require the legitimacy of a single market system or a centralized exchange operated by the state.³⁹ In the case of corruption at PT Asabri (Persero), it cannot be denied that the corruption committed by the perpetrators was inherent in the misuse of investment funds that occurred during the period from 2012 to 2019, involving the names of the perpetrators as nominees or nominees for assets resulting from corruption. The misuse of funds is systematic because it involves internal parties of PT Asabri (Persero), including two President Directors of PT Asabri from the periods of 2011-2016 and 2016-2020, the Director of Investment and Finance for the period of 2013-2019, and the Head of the Investment and Finance Division for the period of 2012-2015, as well as the involvement of external parties including Benny Tjokrosaputro and Heru Hidayat as asset managers of investments such as insurance, pension, and health funds.⁴⁰

The two main perpetrators, Benny Tjokrosaputro and Heru Hidayat, have received the most attention as suspects due to their roles as beneficial owners while PT Asabri (Persero) is the aggrieved party.⁴¹ As external parties, Benny Tjokrosaputro and Heru Hidayat are the ones who manage the transactions and investments of PT Asabri (Persero) and include their names or other affiliates in nominee statements or ownership deeds, directly or indirectly making them

39. Lindsay X. Lin, "Deconstructing Decentralized Exchanges", *Stanford Journal of Blockchain Law and Policy* (2019): 1-20, <https://stanford-jblp.pubpub.org/pub/deconstructing-dex>.

40. Monica Wareza, "Megaskandal Asabri", *Market*, August 10, 2021, <https://www.cnbcindonesia.com/market/20210810173814-17-267620/megaskandal-asabri-nominee-pejabat-asabri-dicecar-kejagung>.

41. FATF-Egmont Group, *Concealment of Beneficial Ownership* (Paris: Financial Action Task Force, 2018), <https://www.fatf-gafi.org/media/fatf/documents/reports/FATF-Egmont-Concealment-beneficial-ownership.pdf>.

beneficial owners.⁴² Before the verdict was delivered by the panel of judges in the trial, the Public Prosecutors Office had identified instances of money laundering, where money or assets resulting from corruption cannot or are difficult to identify in terms of origin and existence, thus complicating the asset repatriation process concealed by various or multiple layers intentionally created by the perpetrators.⁴³ PT Indodax, as one of Indonesia biggest crypto exchange, was examined by the Attorney General's Office to investigate and identify ongoing money laundering activities. Despite this, the Public Prosecutor could not prove that cryptocurrency was used as an instrument for money laundering. The reasons for the failure to disclose the use of cryptocurrency as a money laundering instrument are unclear.

The implementation of the Travel Rule in Indonesia remains challenging. This is because there needs to be information alignment between the sending and receiving exchangers, which is hindered by varying regulations between countries, commonly referred to as regulatory arbitrage. Therefore, the international community is currently attempting to agree on minimum standards that can be applied to the Travel Rule. As for Know Your Transaction (KYT), it is explained that the implementation of KYT on CEX in Indonesia has not yet developed much and is not widely known in Indonesia. KYT related to crypto assets is a term that indicates the process of transaction identification among cryptocurrencies. The use of KYT is highly effective for on-chain transactions. Although the process of trading or transacting between cryptocurrencies is off-chain, the process involving the transfer of assets from one wallet to another must be on-chain to be identified by the KYT. From the Financial Transaction Reports and Analysis Center's perspective, if CEX does not enforce compliance with KYT, it will be classified as a suspicious transaction. In the application of KYT, it is explained that CEX is recommended to use paid services to accommodate differences in risk between the exchangers.

42. Yudho Winarto, “Kejagung Beberkan Peran Benny Tjokro Dan Heru Hidayat Di Kasus Asa-bri”, *Kontan.co.id*, February 1, 2021, <https://nasional.kontan.co.id/news/kejagung-beberkan-peran-benny-tjokro-dan-heru-hidayat-di-kasus-asabri>.
43. Mahkamah Agung, “Putusan Nomor 29/Pid.Sus-TPK/2020/PN.Jkt.Pst” (Jakarta Pusat, 2021), <https://putusan3.mahkamahagung.go.id/direktori/putusan/zaeb-c34f55f7675abbc5313030353037.html>; Mahkamah Agung, “Putusan Nomor 30/Pid.Sus/ Tpk/2020/PN Jkt.Pst” (Jakarta Pusat, 2020), <https://putusan3.mahkamahagung.go.id/direktori/putusan/zaeb5552814a167ab0c3313035303430.html>.

CONCLUSION

Based on the research findings to date, Indonesian crypto transactions focus on implementing anti-money laundering regimes to track suspicious transactions, including tracking digital assets such as cryptocurrencies generated from corrupt practices. In Indonesia, Anti-Corruption Institutions, such as the Corruption Eradication Commission, still lack specific policies regarding money laundering from corruption proceeds using crypto exchanges. It is unclear whether regulations apply in Indonesia regarding the management of money laundering earnings from corruption through crypto exchanges. Strategic policies for eradicating corruption have been implemented in response to this expectation.

Transparency of beneficial ownership (BO) is fundamental to combating illicit financial flows, particularly in the context of cryptocurrency transactions. Global studies have highlighted how opaque ownership structures enable corruption, money laundering, and terrorist financing, while comparative experiences from Brazil, Ghana, and other countries highlight both regulatory innovations and persistent gaps. In Indonesia, the integration of BO regulation with crypto asset oversight represents significant legal progress. Law Number 4 of 2023 of the Republic of Indonesia places crypto assets under the supervision of the Financial Services Authority (OJK), ensuring that crypto trading is no longer treated solely as a commodity activity, but rather as a financial sector subject to prudential and governance standards. Complementary instruments, including Presidential Regulation Number 13 of 2018 and OJK Regulation Number 27 of 2024, explicitly require companies and exchanges to identify and verify beneficial owners based on the Know Your Beneficial Owner (KYBO) principle.

Despite this robust framework, practical enforcement remains challenging. The PT Asabri case illustrates how beneficial owners can obscure the proceeds of corruption through nominee structures, while asset tracing efforts through CEXs demonstrate the limitations of proving the role of cryptocurrency money laundering. The weak implementation of the Travel Rule and Know Your Transaction (KYT) protocols further exacerbate vulnerabilities, reflecting domestic regulatory inconsistencies and the risk of international arbitration. From a fiscal perspective, Minister of Finance Regulations 68/PMK.03/2022 and 69/PMK.03/2022 link crypto asset taxation to cryptocurrency data, offering both revenue benefits and enhanced oversight of digital financial flows.

Overall, Indonesia's approach demonstrates a dynamic convergence between global standards and national interests. Without stringent verification, international collaboration, and enhanced technical enforcement of the KYBO, Travel Rule, and KYT, cryptocurrency regulation may devolve into a superficial compliance exercise rather than an effective deterrence against money laundering and corruption. Strategic policies include initiatives to hold corrupt individuals accountable, support global anti-corruption frameworks, and improve diplomatic engagement through international cooperation.

BIBLIOGRAPHY

Ahunu, Linda. "Ghana's Beneficial Ownership Intervention". *Africa Centre for Energy Policy*. 2018, 19-28. <https://www.jstor.org/stable/resrep31184.5>.

Alhakim, Abdurakhman, and Tantimin. "The Legal Status of Cryptocurrency and Its Implications for Money Laundering in Indonesia". *Padjadjaran Jurnal Ilmu Hukum* 11, n.º 2 (2024): 231-53. <https://doi.org/10.22304/pjih.v11n2.a4>.

Angélico, Fabiano, and Lígia Zagato. "Beneficial Ownership Transparency in Brazil". *Transparency International* (2017): 19. <http://www.jstor.com/stable/resrep20590.8>.

Benson, Vladlena, Umut Turksen, and Bogdan Adamyk. "Dark Side of Decentralised Finance: A Call for Enhanced AML Regulation Based on Use Cases of Illicit Activities". *Journal of Financial Regulation and Compliance* 32, n.º 1 (2024): 80-97. <https://doi.org/10.1108/JFRC-04-2023-0065>.

Buku, Mercy. "Beneficial Ownership: Improving Financial Transparency to Combat Crime and Corruption". *Global Center on Cooperative Security*. 2022, 2-14. <https://www.jstor.org/stable/resrep41528>.

Carlisle, David. "Money Laundering Through DEXs and Mixers", 2022. <https://www.elliptic.co/blog/money-laundering-through-dexs-and-mixers>.

Coinbase. "What Is a DEX?", 2022. <https://www.coinbase.com/learn/crypto-basics/what-is-a-dex>.

"Crypto Crime Trends from Chainalysis", 2024. <https://www.chainalysis.com/blog/2024-crypto-crime-report-introduction/>.

Ergo. "CEX vs DEX: What Are Differences? | Ergo Platform", 2021.

Europol. "Cryptocurrencies: Tracing the Evolution of Criminal Finances". *Europol* (2021): 20. <https://www.europol.europa.eu/cms/sites/default/files/documents/Europol%20Spotlight%20-%20Cryptocurrencies%20-%20Tracing%20the%20evolution%20of%20criminal%20finances.pdf>.

Financial Action Task Force (FATF). *Beneficial Ownership and Transparency of Legal Arrangements*. Paris: FATF/OECD, 2024. <https://www.fatf-gafi.org>.

- . *Beneficial Ownership of Legal Persons*. Paris: FATF/OECD, 2023. <https://www.fatf-gafi.org>.
- . *International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation: The FATF Recommendations*. Paris: FATF/OECD, 2012; updated 2023. <https://www.fatf-gafi.org/content/dam/fatf-gafi/recommendations/FATF%20Recommendations%202012.pdf.coredownload.inline.pdf>.
- . *Transparency and Beneficial Ownership*. Paris: FATF/OECD, 2014. <https://www.fatf-gafi.org/content/dam/fatf-gafi/guidance/Guidance-transparency-beneficial-ownership.pdf>.

Financial Action Task Force (FATF)-Egmont Group. *Concealment of Beneficial Ownership*. Paris: Financial Action Task Force, 2018. <https://www.fatf-gafi.org/media/fatf/documents/reports/FATF-Egmont-Concealment-beneficial-ownership.pdf>.

Földes, Ádám. Maggie Murphy, Maíra Martini and Deborah Unger. “Where Is Beneficial Ownership Relevant?”. *Transparency International* (2017): 4-7. <http://www.jstor.com/stable/resrep20573.4>.

Forstater, Maya, Michael G. Findley, Jodi Vittori, Yaya J. Fanusie and Miles Kahler. “Council on Foreign Relations Report Part Author (s): Miles Kahler Countering Illicit Financial Flows: Expanding Agenda, Fragmented Governance”. 2018, 0-11.

George, Benedict. “Centralized Exchange (CEX) vs. Decentralized Exchange (DEX): What’s the Difference?”. 2022. <https://www.coindesk.com/learn/centralized-exchange-cex-vs-decentralized-exchange-dex-whats-the-difference/>.

Global Financial Integrity. “Illicit Financial Flows”. 2025. <https://gfintegrity.org/issue/illicit-financial-flows/>.

Issues, Contemporary, and I N Criminal. “Confiscation of Assets Laundered through Cryptocurrency Transactions in Indonesia: A Regulatory Framework Mahdavika Arsy Mubarak * Fakultas Hukum Universitas Islam Indonesia, Yogyakarta, Indonesia, Ayu Izza Elvany Fakultas Hukum Universitas Islam Indo” 1 (2024): 37-62.

Lin, Lindsay X. “Deconstructing Decentralized Exchanges”. *Stanford Journal of Blockchain Law and Policy* (2019): 1-20. <https://stanford-jblp.pubpub.org/pub/deconstructing-dex>.

Mahkamah Agung. “Putusan Nomor 29/Pid.Sus-TPK/2020/PN.Jkt.Pst”. Jakarta Pusat, 2021. <https://putusan3.mahkamahagung.go.id/direktori/putusan/zaeb-c34f55f7675abbc5313030353037.html>.

---. “Putusan Nomor 30/Pid.Sus/Tpk/2020/PN Jkt.Pst”. Jakarta Pusat, 2020. <https://putusan3.mahkamahagung.go.id/direktori/putusan/zaeb5552814a-167ab0c3313035303430.html>.

Martini, Maíra. “The Weakest Links: The Consequences Of Non-Comprehensive Beneficial Ownership Standards”. *JSTOR* (2019): 23-5. <http://www.jstor.com/stable/resrep20536.6>.

Nelson, Febby Mutiara, Maria Dianita Prosperiani, Choky Risma Ramadhan and Priska Putri Andini. "Cracking the Code: Investigating the Hunt for Crypto Assets in Money Laundering Cases in Indonesia". *Journal of Indonesian Legal Studies* 9, n.º 1 (2024): 89-130.

Putri, Tiara, Amiludin, Dwi Nurfauziah Ahmad, and Hidayatulloh. "Inadequate Cryptocurrency and Money Laundering Regulations in Indonesia (Comparative Law of US and Germany)". *Yustisia* 12, n.º 2 (2023): 129-52. <https://doi.org/10.20961/yustisia.v12i2.71835>.

Radon, Jenik, and Mahima Achuthan. "Beneficial Ownership Disclosure: The Cure for the Panama Papers Ills". *Journal of International Affairs Editorial Board* 70, n.º 2 (2017): 85-108. <https://www.jstor.org/stable/90012622>.

Sahri, Fidri. "Legal Action Withdrawal of Assets Proceeding from Corruption Money Laundering through Cryptocurrency". 2023. <https://doi.org/10.4108/eai.11-11-2023.2351302>.

Scorechain. "Are DEXs Widely Used to Launder Money and Finance Terrorism? Scorechain Report on the State of ML/TF through DEXs in 2020". *Researches and Statistics*. 2021. <https://www.scorechain.com/blog/are-dexs-widely-used-to-launder-money-and-finance-terrorism>.

Sitompul, Ariman. "Cryptocurrency Based Money Laundering in Indonesia". *International Asia of Law and Money Laundering* 4, n.º 1 (2025): 7-12. <https://doi.org/10.59712/iaml.v4i1.113>.

Smart Valor. "Centralized vs. Decentralized Exchanges". 2022. <https://smartvalor.com/en/news/cefi-defi>.

Stobierski, Tim. "Decentralized Exchanges (DEXs) & KYC". 2022. <https://withpersona.com/blog/decentralized-exchanges-and-kyc>.

---. "How Do AML Regulations Apply to Crypto Exchanges?". 2022. <https://withpersona.com/blog/aml-crypto>.

Swartz, Kristi. "Mapping Out How Decentralised Exchanges Can Be Regulated". 2021.

Teichmann, Fabian, and Marie-Christin Falker. "Cryptocurrencies and Financial Crime: Solutions from Liechtenstein". *Journal of Money Laundering Control* 24, n.º 4 (2020): 775-88. <https://doi.org/10.1108/jmlc-05-2020-0060>.

Tropina, Tatiana, "Big Data: Tackling Illicit Financial Flows". In *Big Data: A Twenty-First Century Arms Race*, 41-52 (Washington D.C.: Atlantic Council, 2017). https://cdn.atlanticcouncil.org/wp-content/uploads/2017/06/Big_Data_A_Twenty-First_Century_Arms_Race_web_0627_Chapter_4.pdf.

"United Nations Office on Drugs and Crime". Accessed May 19, 2025. <https://www.unodc.org/>.

Wareza, Monica. "Megaskandal Asabri". *Market*, August 10, 2021. <https://www.cnb-cindonesia.com/market/20210810173814-17-267620/megaskandal-asabri-nomine-pejabat-asabri-dicecar-kejagung>.

Winarto, Yudho. "Kejagung Beberkan Peran Benny Tjokro Dan Heru Hidayat Di Kasus Asabri". *Kontan.co.id*, February 1, 2021. <https://nasional.kontan.co.id/news/kejagung-beberkan-peran-benny-tjokro-dan-heru-hidayat-di-kasus-asabri>.

Yazdanparast, Ehsan. "CEX vs DEX: A Comprehensive Comparison of Features". *Coinmonks*, 2021. <https://medium.com/coinmonks/cex-vs-dex-a-comprehensive-comparison-of-features-bb398d416d4f>.

Yin, Hao Hua Sun, Klaus Langenhedt, Mikkel Harley, Raghava Rao Mukkamala and Ravi Vatrapu. "Regulating Cryptocurrencies: A Supervised Machine Learning Approach to De-Anonymizing the Bitcoin Blockchain". *Journal of Management Information Systems* 36, n.º 1 (2019): 37-73. <https://doi.org/10.1080/07421222.2018.1550550>.

DECLARACIÓN DE CONFLICTO DE INTERESES

Las autoras declaran que no existen conflictos de interés financieros, académicos o personales que pudieran haber influido en la realización de este estudio. Esta investigación fue financiada por la Facultad de Ciencias Sociales y Políticas de la Universidad Diponegoro.

DECLARACIÓN DE AUTORÍA

Ika Riswanti Putranti participó en la conceptualización, la curaduría de datos, el análisis formal, la obtención de financiación, la investigación, el diseño metodológico, la administración del proyecto, la gestión de recursos, el uso de software, la supervisión, la validación, la visualización, la redacción del borrador inicial y la redacción, revisión y edición del artículo final.

Reni Windiani participó en la conceptualización, la curaduría de datos, el análisis formal, el diseño metodológico, la redacción del borrador, la redacción y la revisión.