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# A Comparative Legal Study of **Asset Tokenization** by Sovereign Wealth Funds in Indonesia and the EU

Discussing how Indonesia can adopt the EU's asset tokenization regulations and the future projections for the roles of INA and Danantara in managing asset tokenization

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# A COMPARATIVE LEGAL STUDY OF ASSET TOKENIZATION BY SOVEREIGN WEALTH FUNDS IN INDONESIA AND THE EU

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## ABSTRACT

*The rise of blockchain technology has reshaped global finance, with asset tokenization emerging as one of its promising innovations. The European Union's Markets in Crypto-Assets Regulation (MiCA) and Distributed Ledger Technology (DLT) Pilot Regime show how coherent regulation creates impact in market stability and balances innovation. In contrast, Indonesia's framework remains fragmented. Drawing lessons from the EU, Indonesia could adopt clearer classifications, licensing systems, and controlled testing environments to support responsible tokenization. Within this structure, the INA and Danantara will hold strategic potential to develop and manage tokenized sovereign assets under OJK's supervision with their own function. Adapting MiCA's principle, DLT Pilot Regime's flexibility, and a synergic role between INA and Danantara would strengthen Indonesia's digital asset ecosystem.*

**Keywords:** *Tokenization, Asset, EU, Indonesia.*

## INTRODUCTION

### A. BACKGROUND

The digital transformation of global finance has accelerated with the rise of blockchain technology, one of its most prominent applications being asset tokenization. Asset tokenization provides a novel scheme for representing ownership or rights to an asset using digital tokens on a blockchain platform. Through this procedure, assets can be divided into fractionalized assets, traded more easily with increased liquidity, and greater transparency in asset transactions.<sup>1</sup>

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<sup>1</sup> Christian Fisch, "Initial Coin Offerings (ICOs) to Finance New Ventures," *Journal of Business Venturing* 34, no. 1 (October 9, 2018): 1–22, <https://doi.org/10.1016/j.jbusvent.2018.09.007>.

According to the World Economic Forum, the term “tokenization” refers to the process of using a programmable ledger to digitally represent the ownership of a Real-World Asset (RWA), such as equities, bonds, real estate, or infrastructure, in a transferable format. Tokenization facilitates information and value exchange by generating provably unique digital tokens that may be issued, stored, and exchanged on these ledgers called Distributed Ledger Technologies (DLTs).<sup>2</sup> Researchers describe tokenization as the process of digitizing an asset, in which a crypto-asset or token serves as one of the broader uses of blockchain technology.<sup>3</sup> These tokens are designed to represent fractions of underlying assets, making previously liquid assets accessible to a wider group of investors.

Beyond advancing technology, asset tokenization is significant because it signals a fundamental shift in the way assets are held, traded, and managed. Through programmable securities, it may democratize access to investment possibilities and simplify regulatory compliance.<sup>4</sup> Proponents of tokenization point out its possible advantages, such as more transparency, quicker settlement, lower transaction costs, and improved liquidity.<sup>5</sup> While posing significant regulatory challenges, these advantages have the potential to transform investing strategies and open up new avenues for institutional investors like Sovereign Wealth Funds (SWF) in the global capital market.

The International Monetary Fund (IMF) stated that SWFs play a crucial role in macroeconomic management and global financial stability. Thus, SWFs are established to manage state-owned capital and ensure long-term economic stability.<sup>6</sup> SWFs are tasked

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<sup>2</sup> World Economic Forum and Accenture, “Asset Tokenization in Financial Markets: The Next Generation of Value Exchange (Insight Report),” *World Economic Forum* (May 2025), accessed September 23, 2025, [https://reports.weforum.org/docs/WEF\\_Asset\\_Tokenization\\_in\\_Financial\\_Markets\\_2025.pdf](https://reports.weforum.org/docs/WEF_Asset_Tokenization_in_Financial_Markets_2025.pdf).

<sup>3</sup> Nauris Jūrmalis, Anželika Berķe-Berga, and Marta Urbāne, “Advancing Asset Tokenization in the European Union and Latvia: A Regulatory and Policy Perspective,” *Laws* 14, no. 1 (January 16, 2025): 7, <https://doi.org/10.3390/laws14010007>. p.2.

<sup>4</sup> Primavera De Filippi and Aaron Wright, *Blockchain and the Law: The Rule of Code* (Cambridge, Massachusetts: Harvard University Press, 2018).

<sup>5</sup> Financial Stability Board, “The Financial Stability Implications of Tokenisation” (Financial Stability Board (FSB), October 24, 2024), accessed September 9, 2025, <https://www.fsb.org/uploads/P221024-2.pdf>.

<sup>6</sup> Jordan Sperling, “Cutting the Cord: A Comparative Analysis of Sovereign Wealth Fund Independence in Nigeria, Alberta and Alaska,” *University of Alberta Repository*, January 9, 2023, accessed September 23, 2025, <https://www.ualberta.ca/en/political-science/media-library/honors-thesis/jordan-sperling.pdf>. p.18.

with preserving wealth for future generations while contributing to domestic development.<sup>7</sup> By enabling them to engage in cutting-edge capital markets and enhancing the liquidity and governance of their portfolios, SWFs can revolutionize their operations through the deployment of cutting-edge financial instruments like tokenized assets. The SWF for Indonesia stands for Indonesia Investment Authority (INA), which was established in 2021 to manage and attract large-scale investments into strategic sectors,<sup>8</sup> and Daya Agata Nusantara (Danantara). In this matter, Danantara has a broader function than INA. Not only to collect investment funds, Danantara will also manage and optimize investment funds, as well as consolidate assets that are currently under the state-owned enterprises.<sup>9</sup> However, realizing these opportunities for SWFs requires navigating the unresolved legal complexities of tokenization itself.

As interest in tokenizing continues to grow, the contradiction between borderless exchangeable digital tokens and jurisdictionally bound assets becomes more pronounced. One of the most commonly mentioned concerns about tokenization is the absence of solid legal frameworks. Legal literature has examined the property of the digital assets, the legal consequences of token transfers, and the feasibility of using tokens to represent ownership rights in assets.<sup>10</sup> Some approaches begin with principles and give theoretical frameworks, whereas others focus on actual legal outcomes. However, the multiplicity of

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<sup>7</sup> Babak Nikraves, "A United States Sovereign Wealth Fund: First Impressions | Insights | Greenberg Traurig LLP," n.d., <https://www.gtllaw.com/en/insights/2025/2/a-united-states-sovereign-wealth-fund-first-impressions>.

<sup>8</sup> Ministry of Foreign Affairs of the Republic Indonesia, "Envisioning Indonesia Investment Authority (INA): Game Changer for Indonesia's Investment," Slide show, 2023, <https://indonesianembassy.de/wp-content/uploads/2021/02/2021-A-Brief-Introduction-to-Indonesia-Investment-Authority-SWF-INA.pdf>.

<sup>9</sup> Ramli, Rully R., and Aprilia Ika. "Sama-sama Kelola Dana Investasi, Apa Beda Danantara Dengan INA? (Both Manage Investment Funds, What is the Difference Between Danantara and INA?)." Kompas.com, November 19, 2024. Accessed September 23, 2025. <https://money.kompas.com/read/2024/11/19/163054326/sama-sama-kelola-dana-investasi-apa-beda-danantara-dengan-ina>.

<sup>10</sup> Xavier Lavyssière, "Legal Structures of Tokenised Assets," European Journal of Risk Regulation, May 15, 2025, 1–13, <https://doi.org/10.1017/err.2024.88>, p. 1.

jurisdictions and the overlaps of property, commercial, and financial laws confound these efforts to bring intelligibility.<sup>11</sup>

Existing literature reveals major holes, notably in the integration of legal, technological, and operational viewpoints. Most studies predominantly focus on security risks related to tokenized securities and blockchain. Among the issues are cybersecurity concerns, smart contracts' weaknesses, and the long-term ramifications of technical failures.<sup>12</sup> The tension between technologies and legal objectives can be settled in two ways. First, adapt technical objects to match legal standards, and second, create the legal constructs that guarantee legal certainty given an ensemble of practices and technologies.<sup>13</sup> Therefore, a coherent legal framework is required to uphold the legitimacy and stability of tokenized financial markets.

The European Union (EU) has notably positioned itself as a global leader in providing such a framework. The Markets in Crypto-Assets Regulation (MiCA) establishes a harmonized legal regime for crypto-assets and tokens, including asset-referenced tokens and e-money tokens.<sup>14</sup> The MiCA prioritizes consumer protection, transparency, and operational resilience, all of which are essential for managing the risks connected with digital assets.<sup>15</sup> Complementing MiCA, the DLT Pilot Regime Regulation also introduces a controlled legal environment where financial institutions may experiment with issuing, trading, and settling tokenized financial instruments using blockchain infrastructures.<sup>16</sup> These initiatives not only reflect the EU's commitment to

<sup>11</sup> Rosa M. Garcia-Teruel and Héctor Simón-Moreno, "The Digital Tokenization of Property Rights. A Comparative Perspective," *Computer Law & Security Review* 41 (April 25, 2021): 105543, <https://doi.org/10.1016/j.clsr.2021.105543>.

<sup>12</sup> Rajmund Mirdala, "Tokenization of Real-World Assets: Legal Frameworks, Market Dynamics, and Policy Pathways for a Decentralized Financial Future," *Journal of Applied Economic Sciences (JAES)*, June 1, 2025, 285, [https://doi.org/10.57017/jaes.v20.2\(88\).09](https://doi.org/10.57017/jaes.v20.2(88).09), p.286.

<sup>13</sup> Xavier Lavayssiere, *Op.Cit.*, p. 2.

<sup>14</sup> Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1114> accessed September 23, 2025.

<sup>15</sup> Christian Catalini and Catherine E. Tucker, "Antitrust and Costless Verification: An Optimistic and a Pessimistic View of the Implications of Blockchain Technology," *MIT Sloan Research Paper*, June 19, 2018.

<sup>16</sup> Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 on a Pilot Regime for Market Infrastructures based on Distributed Ledger Technology (DLT). <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R0858>, accessed September 23, 2025.

digital finance but also create legal certainty for institutional investors, including public investment institutions, to adopt tokenization responsibly.

In contrast, Indonesia's legal and institutional framework for asset tokenization remains undeveloped. According to the Commodity Futures Trading Regulatory Agency (CoFTRA or *Badan Pengawas Perdagangan Berjangka Komoditi* (BAPPEBTI)) Regulation No.8/2021 concerning the Guidelines for Conducting Physical Trading of Crypto Assets on Future Exchanges, crypto-assets are primarily classified as commodities, tradable on futures exchanges under CoFTRA's authority. Furthermore, the Financial Service Authority (*Otoritas Jasa Keuangan* (OJK)) mandate is expanded to encompass digital financial innovations under Law No.4 of 2023 concerning the Development and Strengthening of the Financial Sector. Regarding this matter, OJK then issued OJK Regulation No.27/2024 concerning the Implementation of Digital Financial Asset Trading Including Crypto Assets. However, a comprehensive framework specifically tailored to tokenized securities is still absent.

According to the latest news, OJK is currently working on new regulations that will cover the use of crypto for RWA tokenization and as collateral in the financial system. Moreover, OJK stated that several cryptocurrency-based innovations are currently being tested through a regulatory sandbox, ranging from gold, government securities to real estate. OJK aims to finalize regulations related to asset tokenization by this year, 2025.<sup>17</sup> Therefore, OJK's steps are in line with the global trend where crypto-assets are increasingly being used for RWA and alternative financial instruments. However, Indonesia faces challenges in ensuring regulations that can maintain financial stability. This regulatory vacuum presents a significant challenge for INA and Danantara. On the occasion that INA and Danantara opt to invest in the tokenized asset as an alternative financial instruments to optimize their investment strategies as SWFs, without clear

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<sup>17</sup> Rian Alfianto, "OJK Siapkan Regulasi Kripto Untuk Tokenisasi Aset Nyata Dan Agunan (OJK Prepares Crypto Regulation for Real Asset)," Jawa Pos, August 25, 2025, accessed September 23, 2025, <https://www.jawapos.com/kripto/016480211/ojk-siapkan-regulasi-kripto-untuk-tokenisasi-aset-nyata-dan-aguna> n.

regulations, INA and Danantara risk being exposed to legal uncertainty, cyber vulnerabilities, and reputational challenges that could undermine their fiduciary duties.

Given these dynamics, a comparative legal study between the EU and Indonesia becomes crucial. By analyzing both jurisdictions, this article aims to shed light on how SWF can legally and effectively engage with tokenized assets and how Indonesia can adopt some EU regulations related to asset tokenization. Therefore, this article contributes to the literature by bridging the gaps. It seeks to provide policy recommendations for Indonesia as it seeks to embrace digital innovation while maintaining financial integrity.

## B. PROBLEM IDENTIFICATION

1. To what extent can the European Union regulatory framework regarding asset tokenization be adapted to address legal gaps in Indonesia and provide an appropriate framework?
2. How is the INA and Danantara role can be defined in managing the asset tokenization under the current Indonesian regulatory gap?

## DISCUSSION

### A. The Adaptability of the European Union Regulatory Framework on Asset Tokenization to Address Legal Gaps in Indonesia

The MiCA and DLT Pilot Regime represent an integrated and forward-looking framework designed to balance innovation, market stability, and a responsive way towards technological transformation. MiCA focuses on the establishment of a comprehensive and principle-based framework governing the issuance, offering, and provision of services related to crypto-assets that ensures transparency, operational resilience, and protection for consumers, which are critical for mitigating the risks associated with digital assets.<sup>18</sup>

On the other hand, the DLT Pilot Regime provides opportunities for market participants to operate DLT-based market infrastructures under temporary exemptions

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<sup>18</sup> Christian Catalini and Catherine E. Tucker, *Op. Cit.*



from certain EU financial regulations. Its main objective is to test the trading, issuance, and settlement of tokenized financial instruments, enabling legislators to gain practical insights for developing future regulatory frameworks.<sup>19</sup> Hence, the DLT Pilot Regime regulation is way more technical than MiCA. By establishing such frameworks with authorization procedures and prudential requirements, the EU has created the first supranational regulatory environment that enables institutional investors, including SWF and public entities, to engage in tokenized financial responsibly.

The MiCA regulation introduces a functional taxonomy of crypto-assets into three categories, which are asset-referenced tokens (ARTs), e-money tokens (EMTs), and utility tokens under Article 3 of MiCA. ARTs refer to a type of crypto-asset that is not an electronic money token and that purports to maintain a stable value by referencing another value or right or a combination thereof, including one or more official currencies. EMTs means a type of crypto-asset that purports to maintain a stable value by referencing the value of one official currency, while a utility token refers to the type of crypto-asset that is only intended to provide access to a good or a service supplied by its issuer. This classification clarifies the legal nature of each token type and determines applicable obligations for issuers and service providers.

Furthermore, the MiCA includes provisions for supplementary regulation development to ensure a complete legislative framework for DLT assets. Necessary additions include national legislation and additional legal acts to comply with MiCA, as well as regulatory frameworks from financial market supervisory organizations such as the European Central Bank (ECB), European Securities and Markets Authority (ESMA), and European Banking Authority (EBA).<sup>20</sup> As a matter of fact, this is such a multi-level supervisory model coordinated by those authorities. Issuers of ARTs and EMTs are required to obtain authorization from those competent authorities, maintain segregated

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<sup>19</sup> Johan Hallén and Hanna Lindqvist, "Blockchain Regulation in the Spotlight: Key Takeaways from the EU DLT Pilot Regime", <https://setterwalls.se/en/article/blockchain-regulation-in-the-spotlight-key-takeaways-from-the-eu-dlt-pilot-regime/>, accessed on 21 October 2025.

<sup>20</sup> Nauris Jūrmalis, Anželika Berķe-Berga, and Marta Urbāne, *Op.Cit*, p. 10.



reserve assets, and guarantee redemption rights for token holders.<sup>21</sup> In addition, crypto-asset service providers (CASPs), such as custodians, brokers, or trading platform must be licensed under Articles 59-63 and adhere to prudential and conduct obligations, including capital adequacy, risk disclosure, and client asset segregation. The regulation thereby establishes legal certainty on “what” assets qualify as crypto-assets that can be tokenized, “who” can issue or trade them, and “how” they must be governed to maintain market trust. MiCA’s approach is principal-based and institutional, ensuring consistency across the EU’s financial market.

Complementing MiCA, the DLT Pilot Regime provides the technical and operational dimension of the EU’s tokenization framework for DLT-based experimentation. It introduces a sandbox mechanism that permits the use of DLT in issuance, registration, transfer, and storage of tokenized financial instruments on market infrastructures under controlled regulatory exemptions.<sup>22</sup> The regime defines three types of infrastructure: (1) the DLT Multilateral Trading Facility (DLT MTF) for trading; (2) the DLT Settlement System (DLT SS) for settlement; and (3) the DLT Trading and Settlement System (DLT TSS), which integrates both functions.<sup>23</sup> Through the Articles 4-6 of the DLT Pilot Regime, authorized operators may request temporary exemptions to test DLT-based securities markets. However, the exemptions are limited in scope and duration. It applied only to instruments within specified thresholds, such as shares under EUR500 million or bonds under EUR 1 billion.

Regulations like MiCA and the DLT Pilot Regime plays a crucial role and create legal, which will be continued by the SWFs all across the EU nations. For concrete

<sup>21</sup> Rebecca Anguren (*et.al*)., “Crypto-Asset Regulation in the Current International and European Framework”, *Banco De España: Financial Stability Review*, Issue 44, <https://doi.org/10.53479/33798>, p. 117-118.

<sup>22</sup> Autorite Des Marches Financiers (AMF) and Commissione Nazionale Per Le Societa E La Borsa, “Towards a More Competitive European Pilot Regime: A Proposal for Fostering Experimentation by Blockchain-Based Market Infrastructure”, [https://www.amf-france.org/sites/institutionnel/files/private/2025-04/amf\\_consob\\_position-paper-towards-a-more-competitive-european-pilot-regime.pdf](https://www.amf-france.org/sites/institutionnel/files/private/2025-04/amf_consob_position-paper-towards-a-more-competitive-european-pilot-regime.pdf), accessed on 22 October 2025.

<sup>23</sup> European Securities and Markets Authority (ESMA), “DLT Pilot Regime”, <https://www.esma.europa.eu/esmas-activities/digital-finance-and-innovation/dlt-pilot-regime>, accessed on 22 October 2025.

example, Luxembourg will become the first EU member state to issue a blockchain-based treasury certificate in 2026. This project is supervised by the Commission de Surveillance du Secteur Financier and the Central Bank of Luxembourg and will test the use of DLT in short-term sovereign debt issuance. Additionally, the Intergenerational Sovereign Wealth Fund of Luxembourg (FSIL) has allocated 1% of its portfolio to Bitcoin and becoming the first European SWF to gain exposure to this asset class since 2025. In July 2025, the fund may now allocate up to 15% of its assets to alternative investments, including private equity, technological infrastructure, and digital assets. These developments reinforce Luxembourg's role as EU's most forward-looking jurisdiction for regulated digital finance, coinciding with the progressive implementation of MiCA across the EU and make the SWF's blockchain issuance positions Luxembourg as a pioneer in the tokenization of public asset.<sup>24</sup>

From this situation, the EU example shows that SWFs can engage in tokenized asset strategies if supported by a coherent regulatory framework. At this point, the EU is not just regulating crypto and tokenization asset, but laying groundwork for institutional asset tokenization, which makes the adaptation for Indonesia more relevant. Given that the status quo of Indonesia's current regulatory landscape for digital assets remains fragmented and incomplete, Indonesia could selectively adapt key principles from EU regulations. Following the latest status that CoFTRA has fully transferred its authority related to the regulation and supervision of digital financial assets, including crypto-assets, to the OJK in August 2025,<sup>25</sup> Indonesia has entered a new regulatory phase in which all crypto-asset and asset tokenization activities fall under a single financial regulator.

<sup>24</sup> Céline Moille, "Luxembourg Adds Bitcoin to Its Sovereign Wealth Fund and Launches Europe's First Blockchain-Based Treasury Issuance", <https://www.goodwinlaw.com/en/insights/publications/2025/10/insights-finance-pif-luxembourg-adds-bitcoin>. Accessed on 22 October 2025.

<sup>25</sup> Aji Prasetyo, "OJK dan Bappebti Tuntaskan Peralihan Pengawasan Aset Kripto", <https://www.hukumonline.com/berita/a/ojk-dan-bappebti-tuntaskan-peralihan-pengawasan-aset-kripto-lt688b33eb69b1f/>, accessed on 22 October 2025.

Indonesia should adopt a clear legal taxonomy similar to MiCA's Article 3. Tokens representing ownership or claims over RWA could be classified as *tokenized investment assets*, while those used primarily for future-payments or speculative purposes could be treated as *digital commodities*. Additionally, drawing on Articles 59-63 MiCA, OJK could establish a licensing and authorization regime for both institutional issuers and digital asset service-providers. This framework should include fit-and-proper assessments, capital adequacy requirements, and anti-money-laundering (AML) compliance. Danantara could receive special authorization to tokenize state-owned or infrastructure assets under prudential oversight to enhance transparency and investor confidence.

Moreover, Indonesia should incorporate investor-protection mechanisms inspired by MiCA Articles 66-82, including mandatory white papers, disclosure of governance and risk factors, segregation of client assets, and redemption or buy-back rights for asset-backed tokens. In parallel, OJK could adopt the sandbox philosophy of the DLT Pilot Regime (Articles 4-9) by establishing a Sovereign Tokenization Sandbox, a controlled environment where INA and Danantara can pilot tokenized infrastructure or equity projects within defined limits. This approach allows OJK to monitor systemic risks, collect data, and refine technical standards before issuing permanent regulations.

By combining MiCA's legal precision with the DLT Pilot Regime's experimental flexibility, Indonesia can build a coherent regulatory framework that supports innovation in this digital era while maintaining financial integrity. OJK's consolidated authority presents a unique opportunity to craft a "future-proof" digital finance ecosystem, where sovereign funds such as INA and Danantara can legally, transparently, and responsibly leverage asset tokenization to optimize national assets and attract global investment.

## **B. The Projection of the Role of INA and Danantara in Managing the Asset Tokenization in Indonesia**

Some argue that INA will merge into Danantara. However, until now, the two are not in a subordinate relationship, but they have the potential for strategic collaboration.



As an SWF, INA operates with fiduciary independence and focuses on long-term investment returns and capital partnerships rather than day-to-day operational management of state assets. INA's structure resembles institutional investors such as the National Investment and Infrastructure Fund in India (NIIF) and Singapore's GIC.<sup>26</sup> INA manages capital and investment. On the other hand, Danantara's function is to consolidate, optimize, and monetize assets belonging to state-owned enterprises (SOEs). This includes managing idle or non-productive assets, executing corporate restructuring, and preparing asset portfolios for commercialization or tokenization. In this way, Danantara operates closer to the ground. According to the Deputy Head of Danantara, Danantara has three functions, which are investment, development investment, and asset management.<sup>27</sup>

The structural differences allow the two institutions to complement each other rather than overlap. They could form a vertically integrated model of sovereign asset tokenization, where Danantara prepares the underlying assets, and INA structures and issues tokenized investment products under OJK's oversight. INA could be designated as an institutional issuer of sovereign tokens. It could package infrastructure or equity assets into tokenized securities that represent fractional ownership or revenue rights, issued on distributed ledger platforms supervised by OJK. The issuance process would follow MiCA-style authorization and disclosure standards, including white-paper publication, risk transparency, and investor-protection mechanisms. This role aligns with INA's mandate to attract co-investment and would allow both domestic and international investors to participate in Indonesian strategic assets through compliant digital instruments.

Danantara's projected role would be equally crucial but more operational. Danantara could digitize and tokenize physical or financial assets from SOEs, creating

<sup>26</sup> Tempo, "Jelaskan Beda SWF di Berbagai Negara, Sri Mulyani: Indonesia Mirip India", <https://www.tempo.co/ekonomi/jelaskan-beda-swf-di-berbagai-negara-sri-mulyani-indonesia-mirip-india-545417>, accessed on 22 October 2025.

<sup>27</sup> Tempo, "Beda Danantara Prabowo vs Indonesia Investment Authority Bentukan Jokowi", <https://www.tempo.co/ekonomi/beda-danantara-prabowo-vs-indonesia-investment-authority-bentukan-jokowi--1210466>, accessed on 22 October 2025.

standardized datasets and valuation frameworks that support token issuance. Through blockchain-based registries, Danantara could ensure asset provenance, manage post-issuance servicing, and execute profit distribution via smart contracts. In essence, Danantara could provide the asset pipeline and operational management. While INA managed larger scope of investment, Danantara could be more focused on state-owned assets as its primary purpose.

The integration of INA's investment authority and Danantara's asset-management capacity represents Indonesia's pathway toward a state-driven and market-oriented tokenization ecosystem. Through this collaboration, the government can unlock liquidity from state assets without privatization, improve capital efficiency, and invite global investors into Indonesia's development agenda. At the same time, by embedding MiCA, Indonesia can ensure that sovereign tokenization upholds financial stability and legal certainty.

## CONCLUSION

The European Union's MiCA and DLT Pilot Regime offer valuable lessons for Indonesia in building a coherent and future-proof regulatory framework for asset tokenization that creates legal certainty, investor protection, and controlled experimentation. With OJK now holding unified authority over digital financial assets, Indonesia is well-positioned to adopt these principles through clear asset classification, licensing regimes, and a sovereign sandbox for tokenized assets. Within this structure, INA can act as an institutional issuer and global co-investor, while Danantara functions as the consolidator and digital asset manager. Their collaboration, guided by MiCA-inspired governance and OJK's oversight, can unlock state asset liquidity, attract global investment, and strengthen financial integrity.

## Bibliography

### Books

Primavera De Filippi and Aaron Wright, *Blockchain and the Law: The Rule of Code* (Cambridge, Massachusetts: Harvard University Press, 2018).

### Regulation

Regulations (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937.

Regulations (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 on a Pilot Regime for Market Infrastructures Based on Distributed Ledger Technology, and amending Regulations (EU) No 600/2014 and (EU) No 909/2014 and Directive 2014/65/EU

### Journal

Christian Catalini and Catherine E. Tucker, "Antitrust and Costless Verification: An Optimistic and a Pessimistic View of the Implications of Blockchain Technology," *MIT Sloan Research Paper*, June 19, 2018.

Christian Fisch, "Initial Coin Offerings (ICOs) to Finance New Ventures," *Journal of Business Venturing* 34, no. 1 (October 9, 2018): 1–22, <https://doi.org/10.1016/j.jbusvent.2018.09.007>.

Nauris Jūrmalis, Anželika Berķe-Berga, and Marta Urbāne, "Advancing Asset Tokenization in the European Union and Latvia: A Regulatory and Policy Perspective," *Laws* 14, no. 1 (January 16, 2025): 7, <https://doi.org/10.3390/laws14010007>.

Rajmund Mirdala, "Tokenization of Real-World Assets: Legal Frameworks, Market Dynamics, and Policy Pathways for a Decentralized Financial Future," *Journal of Applied Economic Sciences (JAES)*, June 1, 2025, 285, [https://doi.org/10.57017/jaes.v20.2\(88\).09](https://doi.org/10.57017/jaes.v20.2(88).09).



Rebecca Anguren (*et.al*)., “Crypto-Asset Regulation in the Current International and European Framework”, *Banco De España: Financial Stability Review*, Issue 44, <https://doi.org/10.53479/33798>.

Rosa M. Garcia-Teruel and Héctor Simón-Moreno, “The Digital Tokenization of Property Rights. A Comparative Perspective,” *Computer Law & Security Review* 41 (April 25, 2021): 105543, <https://doi.org/10.1016/j.clsr.2021.105543>.

Xavier Lavayssière, “Legal Structures of Tokenised Assets,” *European Journal of Risk Regulation*, May 15, 2025, 1–13, <https://doi.org/10.1017/err.2024.88>.

### Others

Aji Prasetyo, “OJK dan Bappebti Tuntaskan Peralihan Pengawasan Aset Kripto”, <https://www.hukumonline.com/berita/a/ojk-dan-bappebti-tuntaskan-peralihan-pengawasan-aset-kripto-lt688b33eb69b1f/>, accessed on 22 October 2025.

Autorite Des Marches Financiers (AMF) and Commissione Nazionale Per Le Societa E La Borsa, “Towards a More Competitive European Pilot Regime: A Proposal for Fostering Experimentation by Blockchain-Based Market Infrastructure”, [https://www.amf-france.org/sites/institutionnel/files/private/2025-04/amf\\_consob\\_position-paper-towards-a-more-competitive-european-pilot-regime.pdf](https://www.amf-france.org/sites/institutionnel/files/private/2025-04/amf_consob_position-paper-towards-a-more-competitive-european-pilot-regime.pdf), accessed on 22 October 2025.

Babak Nikraves, “A United States Sovereign Wealth Fund: First Impressions | Insights | Greenberg Traurig LLP,” n.d., <https://www.gtlaw.com/en/insights/2025/2/a-united-states-sovereign-wealth-fund-first-impressions>.

Céline Moille, “Luxembourg Adds Bitcoin to Its Sovereign Wealth Fund and Launches Europe’s First Blockchain-Based Treasury Issuance”, <https://www.goodwinlaw.com/en/insights/publications/2025/10/insights-finance-pif-luxembourg-adds-bitcoin>. Accessed on 22 October 2025.

European Securities and Markets Authority (ESMA), “DLT Pilot Regime”, <https://www.esma.europa.eu/esmas-activities/digital-finance-and-innovation/dlt-pilot-regime>, accessed on 22 October 2025.

Financial Stability Board, “The Financial Stability Implications of Tokenisation” (Financial Stability Board (FSB), October 24, 2024), accessed September 9, 2025, <https://www.fsb.org/uploads/P221024-2.pdf>.

Johan Hallén and Hanna Lindqvist, “Blockchain Regulation in the Spotlight: Key Takeaways from the EU DLT Pilot Regime”, <https://setterwalls.se/en/article/blockchain-regulation-in-the-spotlight-key-takeaways-from-the-eu-dlt-pilot-regime/>, accessed on 21 October 2025.

Jordan Sperling, “Cutting the Cord: A Comparative Analysis of Sovereign Wealth Fund Independence in Nigeria, Alberta and Alaska,” *University of Alberta Repository*, January 9, 2023, accessed September 23, 2025, <https://www.ualberta.ca/en/political-science/media-library/honors-thesis/jordan-sperling.pdf>. p.18.

Ministry of Foreign Affairs of the Republic Indonesia, “Envisioning Indonesia Investment Authority (INA): Game Changer for Indonesia’s Investment,” Slide show, 2023, <https://indonesianembassy.de/wp-content/uploads/2021/02/2021-A-Brief-Introduction-to-Indonesia-Investment-Authority-SWF-INA.pdf>.

Ramli, Rully R., and Aprilia Ika. “Sama-sama Kelola Dana Investasi, Apa Beda Danantara Dengan INA? (Both Manage Investment Funds, What is the Difference Between Danantara and INA?).” Kompas.com, November 19, 2024. Accessed September 23, 2025. <https://money.kompas.com/read/2024/11/19/163054326/sama-sama-kelola-dana-investasi-apa-beda-danantara-dengan-ina>.

Rian Alfianto, “OJK Siapkan Regulasi Kripto Untuk Tokenisasi Aset Nyata Dan Agunan (OJK Prepares Crypto Regulation for Real Asset),” Jawa Pos, August 25, 2025, accessed September 23, 2025,

<https://www.jawapos.com/kripto/016480211/ojk-siapkan-regulasi-kripto-untuk-tokenisasi-aset-nyata-dan-agunan>.

Tempo, "Beda Danantara Prabowo vs Indonesia Investment Authority Bentukan Jokowi", <https://www.tempo.co/ekonomi/beda-danantara-prabowo-vs-indonesia-investment-authority-bentukan-jokowi--1210466>, accessed on 22 October 2025.

Tempo, "Jelaskan Beda SWF di Berbagai Negara, Sri Mulyani: Indonesia Mirip India", <https://www.tempo.co/ekonomi/jelaskan-beda-swf-di-berbagai-negara-sri-mulyani-indonesia-mirip-india-545417>, accessed on 22 October 2025.

World Economic Forum and Accenture, "Asset Tokenization in Financial Markets: The Next Generation of Value Exchange (Insight Report)," *World Economic Forum* (May 2025), accessed September 23, 2025, [https://reports.weforum.org/docs/WEF\\_Asset\\_Tokenization\\_in\\_Financial\\_Markets\\_2025.pdf](https://reports.weforum.org/docs/WEF_Asset_Tokenization_in_Financial_Markets_2025.pdf).