AL-MUDHARABAH: Jurnal Ekonomi dan Keuangan Syariah
Vol. 7 No.2, December 2026
P-ISSN: 2655-0547 E-ISSN: 2829-3665
DOI: https://doi.org/10.22373/sbadv936

CENTRAL BANK DIGITAL CURRENCY (CBDC) UNDER INDONESIAN BANKING LAW: AN ASSESSMENT OF LEGAL COMPATIBILITY AND IMPLEMENTATION CHALLENGES

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Abstract

This article assesses the compatibility of Central Bank Digital Currency (CBDC) with Indonesian banking-law principles and identifies the main legal challenges to its implementation. The development of the Digital Rupiah under Project Garuda raises questions about legal certainty, institutional authority, user protection, confidentiality of transaction data, and banking-system stability. Using a normative legal research approach, the study examines legislation, regulatory instruments, and policy documents through statutory and conceptual analysis, legal interpretation, and a structured assessment of CBDC design features. The findings show that the Digital Rupiah is expressly recognized under Law No. 7 of 2011 on Currency, as amended by Law No. 4 of 2023, particularly Article 2(2) and Article 14A. Thus, the principal challenge is not the absence of a legal basis but the need for detailed implementing regulations issued by Bank Indonesia. Prudential compliance requires safeguards against liquidity and disintermediation risks; know-your-customer obligations require risk-based identification by legally responsible entities; confidentiality requirements necessitate a clear distinction between bank secrecy and personal transaction-data protection; and public trust depends on legal certainty, system security, transparency, and accountability. Legal compatibility remains conditional, particularly for prospective retail CBDC arrangements whose operational design has not been finalized. The study contributes a replicable normative assessment matrix, a classification of regulatory needs, and a proposed allocation of responsibility for failed transactions and data breaches.

Keywords: Central Bank Digital Currency; Digital Rupiah; Indonesian Banking Law; Legal Compatibility; Regulatory Challenges.

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DOI: https://doi.org/10.22373/sbadv936

Abstrak

Artikel ini menganalisis kesesuaian hukum *Central Bank Digital Currency* (CBDC) dengan asas-asas hukum perbankan di Indonesia serta mengidentifikasi tantangan hukum utama dalam implementasinya. Pengembangan Rupiah Digital melalui Proyek Garuda memunculkan sejumlah persoalan hukum terkait kepastian hukum, kewenangan kelembagaan, perlindungan pengguna, kerahasiaan data transaksi, dan stabilitas sistem perbankan. Penelitian ini menggunakan metode penelitian hukum normatif dengan pendekatan perundang-undangan dan pendekatan konseptual. Peraturan perundang-undangan, instrumen regulasi, dan dokumen kebijakan dianalisis melalui penafsiran hukum dan penilaian sistematis terhadap karakteristik desain CBDC. Hasil penelitian menunjukkan bahwa Rupiah Digital telah memperoleh pengakuan hukum secara eksplisit melalui Undang-Undang Nomor 7 Tahun 2011 tentang Mata Uang sebagaimana diubah dengan Undang-Undang Nomor 4 Tahun 2023, khususnya Pasal 2 ayat (2) dan Pasal 14A. Dengan demikian, tantangan hukum utama bukanlah ketiadaan dasar hukum, melainkan kebutuhan akan peraturan pelaksanaan yang lebih terperinci melalui Peraturan Bank Indonesia. Kesesuaian dengan prinsip kehati-hatian mensyaratkan adanya mekanisme pengendalian risiko likuiditas dan disintermediasi perbankan. Penerapan prinsip mengenal nasabah (*Know Your Customer*) memerlukan identifikasi pengguna berbasis risiko oleh pihak yang secara hukum bertanggung jawab. Sementara itu, prinsip kerahasiaan menuntut pembedaan yang tegas antara perlindungan rahasia bank dan pelindungan data pribadi dalam transaksi. Kepercayaan publik bergantung pada kepastian hukum, keamanan sistem, transparansi, dan akuntabilitas penyelenggara. Kesesuaian tersebut masih bersifat bersyarat, terutama dalam skenario penerapan CBDC ritel yang desain operasionalnya belum ditetapkan secara final. Kontribusi penelitian ini terletak pada pengembangan matriks pengujian normatif yang dapat direplikasi, klasifikasi kebutuhan regulasi, serta usulan pembagian tanggung jawab hukum dalam penanganan kegagalan transaksi dan kebocoran data.

Kata kunci: *Central Bank Digital Currency*; Rupiah Digital; Hukum Perbankan Indonesia; Kesesuaian Hukum; Tantangan Regulasi.

INTRODUCTION

Digital transformation has reshaped money and the architecture of payment systems. A significant development is Central Bank Digital Currency (CBDC), digital money issued as a liability of the central bank. In Indonesia, the proposed CBDC is the Digital Rupiah, developed under Project Garuda. In 2022, Bank Indonesia published the white paper *Project Garuda: Navigating the Architecture of the Digital Rupiah*, which set out a high-level design and explored potential architectural

arrangements.[1] This initiative goes beyond payment technology by raising legal questions concerning monetary status, central-bank authority, relationships with commercial banks, user protection, transaction-data governance, and financial-system stability.[2]

CBDC initiatives have also advanced internationally. According to a Bank for International Settlements (BIS) survey of 93 central banks published in 2025, 91 percent—85 central banks—were exploring retail CBDC, wholesale CBDC, or both. Exploration of wholesale CBDC has generally progressed further than that of retail CBDC.[3] Countries are at different stages of development: China has conducted e-CNY trials;[4] The Bahamas launched the Sand Dollar in 2020;[5] Nigeria introduced the eNaira in 2021;[6] and Jamaica began the phased rollout of JAM-DEX in 2022.[7]

In Indonesia, these developments align with the modernization of the national payment system through the Indonesia Payment System Blueprint (Blueprint Sistem Pembayaran Indonesia, BSPI) and Project Garuda, which together form part of Bank Indonesia's payment-system transformation agenda.[8] Together, these initiatives demonstrate that Indonesia's payment-system reforms encompass the development of central-bank-issued digital money. Accordingly, the instrument's

[1] Bank Indonesia, Proyek Garuda: Menavigasi Arsitektur Digital Rupiah (Jakarta: Bank Indonesia, 2022), https://www.bi.go.id/id/rupiah/digital-rupiah/Documents/White_Paper_CBDC-2022.pdf, accessed 2 November 2026.

[2] Fitri Handayani and Fatma Yuliana, "Design and Legal Aspect of Central Bank Digital Currency: A Literature Review," Journal of Central Banking Law and Institutions 1, no. 3 (2022): 509–536, https://doi.org/10.21098/jcli.v1i3.35

[3] Anamaria Illes, Anneke Kosse, and Peter Wierts, Advancing in Tandem: Results of the 2024 BIS Survey on Central Bank Digital Currencies and Crypto, BIS Papers No. 159 (Basel: Bank for International Settlements, 2025), https://www.bis.org/publ/bppdf/bispap159.pdf

[4] Working Group on E-CNY Research and Development of the People's Bank of China, Progress of Research & Development of E-CNY in China (Beijing: People's Bank of China, July 2021), https://www.pbc.gov.cn/en/3688110/3688172/4157443/4293696/2021072014364791207.pdf.

[5] Central Bank of The Bahamas, "The Sand Dollar Is on Schedule for Gradual National Release to The Bahamas in Mid-October 2020," Public Update, September 25, 2020, https://www.centralbankbahamas.com/news/public-notices/the-sand-dollar-is-on-schedule-for-gradual-national-release-to-the-bahamas-in-mid-october-2020?N=N&page=6, accessed 11 October 2026.

[6] Central Bank of Nigeria, "President Buhari to Unveil eNaira on Monday, 25 October 2021," Press Release, October 23, 2021, https://www.cbn.gov.ng/Out/2021/CCD/eNaira%20Launch%20Press%20release%20%20231021.pdf, accessed 1 October 2026.

[7] Bank of Jamaica, Annual Report 2022 (Kingston: Bank of Jamaica, 2023), https://boj.org.jm/wp-content/uploads/2023/04/2022-BOJ-Annual-Report.pdf

[8] Mirza Yuniar Isnaeni Mara, Tony Noor Tjahjono, Anggita Cinditya Mutiara Kusuma, Mahsa Edgina Intan Ersifa, Muhammad Hasan Ghazali, Raissa Sofia Khoirinnisa Killian, and Azizah Farras, Ekonomi and Keuangan Digital: Konsep and Implementasi di Indonesia (Jakarta: BI Institute, 2025).

legal status and the conditions governing its deployment require careful examination.[9]

The legal status of the Digital Rupiah must first be considered under Law No. 7 of 2011 on Currency, as amended by Law No. 4 of 2023 on Financial Sector Development and Strengthening (the P2SK Law). Amended Article 2(2) recognizes the Digital Rupiah as a form of Rupiah, while Article 14A(1)–(2) governs its management and confers exclusive authority on Bank Indonesia. Article 14A(3) requires consideration of legal-tender status, stability, inclusion, and data security; paragraph (4) requires planning to be coordinated with the government; and paragraph (5) delegates further rules on issuance to Bank Indonesia Regulations (Peraturan Bank Indonesia, PBI). Article 3(1)(c) of PBI No. 3 of 2026 likewise lists the Digital Rupiah as a form of Rupiah, although Article 3(3) provides that its regulation will be addressed in a separate PBI. Because PBI No. 3 of 2026 principally governs banknotes and coins, this reference should not be construed as a comprehensive technical regime for the Digital Rupiah. Legal recognition, the adequacy of implementing rules, and operational readiness must therefore be examined separately.

This study employs four analytical frameworks because each addresses different legal obligations and consequences. Prudential conduct and trust are grounded in banking-governance rules and legal doctrine; bank secrecy constitutes a positive legal duty with defined subjects and protected information; and know-your-customer (KYC) requirements are operational compliance obligations under regulatory frameworks for anti-money laundering (AML), counter-terrorist financing (CTF), and counter-proliferation financing. These frameworks do not necessarily have the same legal status or bind the same actors. Instead, they provide complementary perspectives for assessing the Digital Rupiah.

Recent scholarship has examined the legal dimensions of CBDC from several perspectives. Handayani and Yuliana (2022), in "Design and Legal Aspect of Central Bank Digital Currency: A Literature Review," analyse CBDC design choices and their legal consequences. They distinguish between wholesale and retail models and between token-based and account-based arrangements, highlighting their implications for currency law, privacy, distributed ledger technology, insolvency, and relations with the banking sector.[10] Their principal emphasis, however, remains on CBDC architecture and its legal effects, rather than on an

[9] Raphael Auer, Giulio Cornelli, and Jon Frost, "Rise of the Central Bank Digital Currencies," International Journal of Central Banking 19, no. 4 (2023): 185–214, https://www.ijcb.org/journal/v19n4/rise-central-bank-digital-currencies.

[10] Handayani and Yuliana, "*Design and Legal Aspect of Central Bank Digital Currency: A Literature Review*".

integrated assessment of compatibility with the principles of Indonesian banking law.

Other scholarship has shifted attention from CBDC design to the legal status of the Digital Rupiah. In "Menguak Status dan Legalitas Rupiah Digital sebagai Legal Tender (Perspektif Teori Keadilan Bermartabat)," Setjoatmadja and Kameo (2025) use normative legal research to analyse the Digital Rupiah's status as legal tender. They argue that Article 23B of the 1945 Constitution does not expressly address digital currency and that the existing legal-tender framework is not sufficiently comprehensive. In their view, the resulting uncertainty calls for a clearer legal framework.[11] However, their analysis of legal-tender status through the theory of dignified justice does not directly examine the Digital Rupiah's relationship with banking-law principles.

Another strand of research examines the necessity and timing of implementation. Firdaus (2025), in "Measuring the Urgency of a Digital Rupiah: A Socio-Legal Review," applies a socio-legal approach to assess the need for the Digital Rupiah and the legal and social implications of its introduction.[12] Although this study broadens the debate to include implementation urgency and socio-legal consequences, it does not specifically assess whether the characteristics of the proposed instrument are consistent with Indonesian banking-law principles.

More recent scholarship has focused on data protection and ex ante compliance assessment. Yuspin et al. (2026), in "Regulatory Sandbox for Ex-Ante Data Protection in the Digital Rupiah (CBDC) Pilot: A Doctrinal Comparison," argue that CBDC is not merely a payment instrument: its capacity to record, trace, and process transactions also creates a data-processing framework. They propose a rights-based regulatory sandbox to test personal-data compliance by integrating CBDC architecture, tiered KYC, data minimization, access governance, and remedies.[13] Nevertheless, their analysis focuses on data protection and sandbox-based testing rather than comprehensive compatibility with Indonesian banking-law principles.

The existing literature therefore has distinct emphases: Handayani and Yuliana (2022) examine CBDC design and legal consequences; Setjoatmadja and Kameo (2025) address legality and status; Firdaus (2025) examines socio-legal

[11] Sylvia Setjoatmadja and Jeferson Kameo, "Menguak Status and Legalitas Rupiah Digital sebagai Legal Tender (Perspektif Teori Keadilan Bermartabat)," Jurnal Hukum & Pembangunan 55, no. 3 (2025), https://doi.org/10.21143/jhp.vol55.no.3.1804

[12] Sendy Pratama Firdaus, "Measuring the Urgency of a Digital Rupiah: A Socio-Legal Review," *Journal of Central Banking Law and Institutions* 4, no. 3 (2025): 505–532, https://doi.org/10.21098/jcli.v4i3.283

[13] Wardah Yuspin, Arief Budiono, Turdialiev Mukhammad Ali Polatjon ogli, Jompon Pitaksantayothin, and Naeem Rakha Allah, "Regulatory Sandbox for Ex-Ante Data Protection in the Digital Rupiah (CBDC) Pilot: A Doctrinal Comparison," Journal of Law and Legal Reform 7, no. 3 (2026): 1785–1818, https://doi.org/10.15294/jllr.v7i3.44027

urgency; and Yuspin et al. (2026) emphasize regulatory sandboxes and data protection. Unlike studies that concentrate on individual issues, this article develops a normative assessment matrix organized by legal principle, CBDC type, duty-bearing actor, and category of regulatory deficiency. The contribution does not lie in claiming that these four principles have been neglected; rather, it lies in a replicable classification and a proposed allocation of responsibility for failed transactions and data breaches.

Addressing this gap is important because CBDC implementation could change both legal relationships and the allocation of functions within the financial system. Potential consequences extend to the distribution of money, relationships between Bank Indonesia and commercial banks, public access to payment instruments, transaction monitoring, data protection, and banking stability. The prudential principle provides a framework for evaluating risk management and systemic stability; KYC requirements govern user identification, verification, and monitoring; confidentiality obligations protect specified information and transaction data; and the principle of trust concerns the Digital Rupiah's legitimacy, security, legal certainty, and public acceptance.

The risk of deposit outflows is particularly relevant to retail CBDC scenarios that provide the public with access to digital central-bank money. This risk should not be assumed to apply equally to wholesale CBDC, which operates between institutions. Balance, remuneration, and transfer limits are possible design measures, but their proportionality and implications for financial stability would need to be assessed before retail features were adopted.[14]

Against this background, the article addresses three research questions: (1) How is CBDC conceptualized within Indonesia's financial system? (2) To what extent is CBDC compatible with the principles of Indonesian banking law? (3) What legal challenges could arise from implementing CBDC under Indonesian banking law?

The study aims to analyse CBDC within Indonesia's financial system, evaluate its compatibility with banking-law principles, and identify legal challenges associated with the Digital Rupiah. It draws on the theory of legal certainty to assess the clarity, consistency, and predictability of CBDC regulation within the Indonesian legal system. Legal certainty depends on sufficiently clear norms and their consistent application. Banking-law principles provide the conceptual framework for assessing whether the implementation of the Digital Rupiah conforms to the legal requirements governing banking activities in Indonesia.[15]

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[14] Nyffenegger, Remo, "Central Bank Digital Currency and Bank Intermediation: Medium of Exchange vs. Savings Vehicle." *European Economic Review* 170 (2024): 104890. https://doi.org/10.1016/j.euroecorev.2024.104890.

[15] Sudikno Mertokusumo, *Mengenal Hukum: Suatu Pengantar* (Yogyakarta: Liberty, 2007).

The article's principal contribution is a four-stage assessment model that (i) establishes the existence and hierarchy of relevant legal norms; (ii) distinguishes duty-bearing entities and protected interests under wholesale and retail CBDC arrangements; (iii) applies legal-certainty indicators concerning institutional authority, consistency across legal norms, rights and duties, and accountability; and (iv) classifies findings as compatible, conditionally compatible, or not yet assessable. The resulting normative assessment matrix (Table 2) and regulatory-needs map (Table 3) connect doctrinal legal analysis to operational recommendations for Bank Indonesia, banks, payment service providers (PSPs), and users.

RESEARCH METHOD

This article adopts a normative (doctrinal) legal research approach to examine CBDC, specifically the Digital Rupiah, in relation to Indonesian banking-law principles. The analysis draws on legislation, official Bank Indonesia documents, legal treatises, peer-reviewed journal articles, earlier studies, and relevant publications by international institutions.[16]

The study combines statutory and conceptual approaches. The statutory approach examines provisions relating to Bank Indonesia, currency, payment systems, banking, personal-data protection, and financial-sector consumer protection. The conceptual approach clarifies the legal nature of CBDC and the Digital Rupiah and uses banking-law principles to assess their compatibility with prudential requirements, know-your-customer obligations, bank secrecy, and the principle of trust.[17]

The primary legal sources comprise Law No. 7 of 2011 on Currency, as amended by Law No. 4 of 2023 (particularly Articles 2 and 14A); Law No. 23 of 1999 on Bank Indonesia, as amended; Law No. 7 of 1992 on Banking, as amended; Law No. 21 of 2008 on Islamic Banking, as amended; Law No. 27 of 2022 on Personal Data Protection; PBI No. 3 of 2026; PBI No. 10 of 2024; PBI No. 10 of 2025 on Payment System Industry Regulation; Financial Services Authority Regulations (Peraturan Otoritas Jasa Keuangan, POJK) No. 8 of 2023 and No. 44 of 2024; and POJK No. 27 of 2024, as amended by POJK No. 23 of 2025, concerning the trading of digital financial assets. Secondary sources include journal articles, books, and studies published by the BIS and IMF. The 2022 Project Garuda white paper, public consultation reports, and Bank Indonesia's 2024 proof-of-concept (PoC) report are treated as policy documents and evidence of the development stage rather than as generally binding legislation. Sources were selected for their relevance to monetary

[16] Soerjono Soekanto and Sri Mamudji, *Penelitian Hukum Normatif: Suatu Tinjauan Singkat* (Jakarta: Rajawali Pers, 2010).

[17] Peter Mahmud Marzuki, *Penelitian Hukum* (Jakarta: Kencana, 2021).

DOI: https://doi.org/10.22373/sbadv936

status, compliance obligations, data protection, institutional roles, and the legal framework in force as of 11 November 2026.

The analysis follows six stages. First, each legal issue is identified and linked to the relevant instruments and provisions. Second, the sources are differentiated according to their legal hierarchy and binding force: statutory provisions, PBI, and POJK are not treated as equivalent to policy white papers. Third, grammatical interpretation clarifies the meanings of terms such as "Digital Rupiah," "Depositing Customer," and "Personal Data Controller," while systematic interpretation examines the relationships among currency law, the Bank Indonesia law, banking regulation, AML/CTF requirements, and data-protection law. Fourth, each issue is evaluated against four legal-certainty indicators: institutional authority; regulatory consistency; rights and duties; and complaints, remedies, and accountability. Fifth, issues are classified as "compatible" when the applicable norms and duty-bearing actors are clear at the stage assessed; "conditionally compatible" when general norms exist but further operational rules are required; or "not yet assessable" when relevant design features or institutional arrangements remain undecided. Sixth, the identified deficiencies are categorized as gaps in substantive law, needs for delegated technical regulation, or matters requiring interpretation and harmonization. As a doctrinal study, the article does not make empirical claims about gaps between law and practice or losses arising under Project Garuda.

Compatibility between the Digital Rupiah and Indonesian banking-law principles is assessed by identifying each legal issue, the applicable provisions, the entities bearing legal duties, and the relevant stage of CBDC development. Findings are categorized as compatible, conditionally compatible, or not yet assessable. "Conditionally compatible" means that an applicable legal basis exists but that additional technical rules, a clearer allocation of responsibilities, or implementing procedures are needed. "Not yet assessable" indicates that the relevant design features or operational model have not been determined sufficiently to permit a conclusive assessment. Neither category necessarily indicates a legal violation. Likewise, the absence of CBDC-specific technical provisions does not automatically establish a legal vacuum, because generally applicable rules may still govern the relevant relationships. The conclusions are limited to legal and policy materials reviewed up to 11 November 2026.

RESULTS AND DISCUSSION

A. The CBDC Concept and Development of the Digital Rupiah in Indonesia

The Digital Rupiah signals a conceptual shift in the relationships among money, the central bank, commercial banks, and the public. In conventional

payment systems, the public holds cash as central-bank money, while everyday digital transactions rely mainly on commercial-bank money, bank accounts, electronic money, and instruments issued by payment service providers. CBDC introduces an additional category: central-bank money that can circulate in digital form.

The legal implications of CBDC depend on its architecture. In wholesale arrangements, direct users are institutions authorized to access interinstitutional settlement infrastructure; identification duties and transaction risks primarily concern participating institutions and system operators. In prospective retail arrangements, the public may access the instrument directly or through intermediaries, raising questions about wallet registration, identity authentication, user rights, and potential transfers out of bank deposits. These two architectures therefore require separate legal assessments.

CBDC differs from other digital payment instruments primarily because it represents a direct liability of the central bank. The distinction concerns not only the instrument's form or storage medium but also its issuer and the legal relationship underlying its use. Accordingly, the Digital Rupiah should not be equated with electronic money or commercial-bank deposits, which have different legal characteristics and consequences.

Table 1: Comparative Legal Status and Functions of CBDC, Electronic Money, and Cryptoassets

Aspect	CBDC	Electronic Money	Cryptoassets	Legal Basis
Issuer or legal status	Central-bank money managed under the authority of Bank Indonesia	Prepaid value recorded as a liability of the issuer under the applicable model	Digital assets traded under OJK regulation; not liabilities of Bank Indonesia	Law 7/2011 as amended by Law 4/2023, Arts 2 and 14A; PBI 10/2025; POJK 27/2024 as amended by POJK 23/2025
Access and function	Wholesale access for authorized participants; retail access remains prospective	Payment instrument provided by an authorized issuer	Tradable financial assets rather than official currency	Bank Indonesia, Project Garuda (2022; 2024 PoC); distinct payment-system and trading regimes

DOI: https://doi.org/10.22373/sbadv936

Aspect	CBDC	Electronic Money	Cryptoassets	Legal Basis
Payment status	Legally recognized form of Rupiah; detailed issuance rules remain subject to delegated regulation	Facilitates Rupiah payments; does not create a new form of central-bank money	Not legal tender in Indonesia	Law 7/2011 as amended by Law 4/2023; PBI 3/2026, Art. 3; Bank Indonesia's position on virtual currencies
Principal risks	Institutional authority, settlement finality, allocation of liability for errors, and data governance	Operational risks, management of float funds, and consumer protection	Valuation, custody, and trading risks	Legal duties and remedies vary by instrument and regulated actor

Bank Indonesia's 2022 Project Garuda white paper outlines the proposed architecture and development agenda. The subsequent proof-of-concept (PoC) report, "Wholesale Rupiah Digital Cash Ledger," published on 13 December 2024, describes tests of issuance, redemption or destruction, and transfers using two prospective technological platforms. The PoC provides evidence of technological feasibility during the exploratory phase; it does not establish that retail digital currency is circulating or that regulations governing public-facing services are in force. Accordingly, this article treats wholesale CBDC as a documented stage of development and retail CBDC as a prospective legal scenario requiring conditional assessment.

The Currency Law, as amended by the P2SK Law, already recognizes the Digital Rupiah as a form of Rupiah. This legal recognition must nevertheless be distinguished from (i) decisions about storage and settlement architecture; (ii) rules governing issuance and participant access; (iii) requirements for intermediaries and user services; and (iv) evidence of actual deployment. The PoC's lack of detail on these matters does not necessarily imply that they are wholly unregulated. Each issue must be evaluated in light of the rules applicable to the relevant actors.

As Table 1 illustrates, the Digital Rupiah is neither an electronic-money balance nor a cryptoasset. The regulation of cryptoasset trading by the Financial Services Authority does not confer legal-tender status on cryptoassets in Indonesia. Electronic money functions as a payment instrument within a legal relationship involving its issuer. By contrast, the Digital Rupiah is legally recognized as a form

of Rupiah managed under Bank Indonesia's authority. Nevertheless, its design and issuance arrangements must be evaluated against the relevant implementing regulations.

Accordingly, the Digital Rupiah's status as digital central-bank money represents more than a technological change in payments. Its development could alter legal relationships among Bank Indonesia, commercial banks, and the public. These potential changes provide the basis for assessing its compatibility with Indonesian banking-law principles.

B. Compatibility of the Digital Rupiah with Indonesian Banking-Law Principles

Assessing the Digital Rupiah under Indonesian banking law requires consideration of its design features, the legal positions of the parties involved, and its stage of development. These distinctions matter because Bank Indonesia, commercial banks, payment service providers (PSPs), and users perform different functions and bear different legal responsibilities. The analysis therefore applies four frameworks: the prudential principle, know-your-customer (KYC) requirements, bank secrecy, and the principle of trust. Together, these frameworks address risk management, user-related compliance obligations, information protection, legal certainty, and accountability in the operation of the Digital Rupiah.

The prudential principle requires banks to exercise due care in performing their functions and conducting business, particularly when safeguarding funds entrusted to them by the public. It is intended to ensure that banking activities are undertaken professionally and consistently with applicable legal rules and standards. Proper application supports bank soundness, strengthens public confidence in financial institutions, and promotes a stable and efficient banking system.[18]

The prudential principle also imposes a normative constraint on digital-payment innovation: innovation should not create unmanaged risks to liquidity, financial intermediation, or confidence in the banking system. Where CBDC could affect deposits and banks' intermediation functions, its design should incorporate appropriate risk-mitigation measures. Potential safeguards include limits on wallet balances, non-interest-bearing arrangements, transaction limits, intermediary-based distribution, and liquidity-monitoring mechanisms.

Compliance with prudential requirements therefore demands a balance between payment-system innovation and the continued effectiveness of commercial banks' intermediation functions. Changes in public preferences for holding and using money could affect banks' ability to attract deposits. The Digital Rupiah's

[18] Azkal Azkia and Safira Mustaqilla, "The Application of Prudential Principles in Micro Business Credit Financing at Bank Indonesia Syariah," Al-Mudharabah: Jurnal Ekonomi and Keuangan Syariah, Vol. 5, No. 1 (June 2024), p. 99.

design should accordingly incorporate proportionate safeguards against risks to banking-system stability.

KYC is not treated as a stand-alone doctrinal principle that automatically binds every CBDC participant. POJK No. 8 of 2023 requires financial service providers subject to the Financial Services Authority (OJK), including banks within its scope, to implement AML, CTF, and counter-proliferation financing programmes. PBI No. 10 of 2024 applies to entities regulated and supervised by Bank Indonesia, including non-bank payment-system service providers conducting specified activities, non-bank foreign-exchange businesses, and other non-bank entities holding relevant Bank Indonesia authorization, approval, or designation. The duty to identify retail users must therefore be assigned to the intermediary legally designated as the obliged entity. In wholesale arrangements, the relevant requirements concern due diligence on participating institutions and the monitoring of counterparty risks.

Tiered KYC is a prospective design option rather than an established requirement specific to the Digital Rupiah. KYC tiers could reflect transaction values and frequency, user categories, and associated risks. Any such arrangement would, however, remain subject to customer due diligence, beneficial-ownership verification, monitoring, record-retention, and reporting obligations under POJK No. 8 of 2023 or PBI No. 10 of 2024, depending on the legal status of the obliged entity. Simplified identification does not remove AML, CTF, or counter-proliferation financing obligations; minimum requirements and any exceptions must have a basis in applicable rules or decisions issued by the competent authority.

Bank secrecy and personal-data protection differ in the information they protect and the entities they bind. Article 2 of POJK No. 44 of 2024 requires banks and affiliated parties to maintain the confidentiality of information concerning Depositing Customers and their Deposits and/or Investor Customers and their Investments; Articles 3 and 4 address exceptions and disclosure procedures, among other matters. These provisions do not automatically extend to all metadata from CBDC-wallet transactions processed by Bank Indonesia or non-bank PSPs. By contrast, Law No. 27 of 2022, particularly Articles 16 and 20, establishes principles and lawful bases for personal-data processing by controllers across a broader range of activities. Where a transaction involves both protected bank-customer information and CBDC users' personal data, the relevant obligations may apply cumulatively according to their respective subjects and protected information. Such application does not require an unwarranted expansion of the legal definition of bank secrecy.

Data protection in a CBDC system therefore extends beyond the confidentiality of account information; it must extend across the entire lifecycle of transaction data. Clear rules governing authorized access, processing purposes,

retention periods, and accountability are needed to prevent misuse. An International Monetary Fund (IMF) study on CBDC data use and privacy protection similarly emphasizes the need to balance financial oversight with the protection of user privacy.[19]

The principle of trust is central to the Digital Rupiah's legitimacy. Public confidence cannot rest solely on the fact that a central bank issues the instrument. It also depends on a clear legal framework, system security, data protection, policy transparency, operator accountability, and accessible dispute-resolution mechanisms.

Public trust further depends on clearly defined user rights and obligations and the responsibilities of participating institutions. A coherent legal framework must be accompanied by transparent information about the instrument's use and the processing and protection of transactions. Responsible operators must also be able to respond effectively to system disruptions and transaction-related problems. When transactions fail or are processed incorrectly, users require reliable investigation, complaint-handling, and remedial procedures. Public confidence thus depends not only on Bank Indonesia's status as issuer but also on effective protection of user rights and transparent, accountable responses to incidents.[20]

The assessment applies three compatibility categories across wholesale and prospective retail arrangements. "Compatible" indicates that relevant legal authority or norms already govern the issue assessed. "Conditionally compatible" indicates that implementation requires additional delegated rules or a clearer allocation of legal responsibilities. "Not yet assessable" applies when the retail architecture, operators' legal status, or complaint-handling arrangements remain insufficiently defined.[21] The assessment highlights three potential tensions among regulatory objectives: transaction traceability under KYC rules versus data minimization; disclosure for supervisory purposes versus bank secrecy; and broader retail access versus the need to mitigate deposit outflows from banks.

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[19] Kieran Murphy, Tao Sun, Yong Sarah Zhou, Natsuki Tsuda, Nicolas Zhang, Victor Budau, Frankosiligi Solomon, Kathleen Kao, Morana Vucinic, and Kristina Miggiani, Central Bank Digital Currency Data Use and Privacy Protection (Washington, DC: International Monetary Fund, 2024), https://doi.org/10.5089/9798400286971.063 (accessed 2 November 2026).

[20] Nurul Maghfirah et al., 'UNDERSTANDING INTELLECTUAL PROPERTY RIGHTS IN THE INDONESIAN TRADING BUSINESS', *Al-Mudharabah: Jurnal Ekonomi Dan Keuangan Syariah* 3, no. 2 (2022): 2, https://doi.org/10.22373/al-mudharabah.v4i2.3384.

[21] Chairul Fahmi and Mizaj Iskandar Usman, 'Measuring Legal Protection for Investment in the Indonesian Capital Market: The Global Comparative Perspective', *Lentera Hukum* (Indonesia) 13, no. 2 (September 2026), https://lenterahukum.jurnal.unej.ac.id/index.php/ejlh/article/view/46890.

DOI: https://doi.org/10.22373/sbadv936

Table 2: Normative Assessment Matrix: Four Banking-Law Frameworks and the Digital Rupiah

Framework / duty-bearing actor	Legal source and indicators	Wholesale assessment	Prospective retail assessment	Principal tension or requirement
Prudential principle; banks and operators, according to their functions	Banking Law; Law 21/2008, Art. 35; Law 7/2011 as amended by Law 4/2023, Art. 14A(3). Risk, liquidity, finality.	Conditionally compatible: stability considerations are recognized, but settlement finality and participant procedures require further specification.	Not yet assessable: effects on bank deposits depend on access, holding limits, and remuneration.	Payment efficiency versus liquidity stability; assess scenarios involving outflows from bank deposits.
KYC; banks subject to OJK rules and specified non-bank entities subject to BI rules	POJK 8/2023; PBI 10/2024. Risk-based identification, monitoring, and reporting.	Conditionally compatible: due diligence on participants and operational risk controls are required.	Not yet assessable: intermediaries and tiered KYC have not been specifically determined for retail CBDC.	Transaction traceability versus minimization of identity data; identify obliged entities according to their activities.
Bank secrecy and personal-data protection; banks, affiliated parties, and data controllers	POJK 44/2024, Arts 2–4; Law 27/2022, Arts 16 and 20. Protected subject matter, lawful processing, and access.	Conditionally compatible: applicable legal regimes exist, but governance of ledger data must be specified.	Not yet assessable: access to user data and controller–processor relationships remain undefined.	Protected deposit information is not equivalent to all CBDC metadata; lawful access requires a clear basis.
Trust; BI, banks, PSPs, and users	Law 7/2011 as amended by Law 4/2023, Art. 14A; PBI 10/2025; Personal Data Protection Law. Authority, rights, remedies.	Conditionally compatible: BI's authority is clear, but responsibility for transaction errors requires further specification.	Not yet assessable: retail complaints and compensation depend on the architecture.	Security and efficiency versus due process, correction rights, and compensation.

Table 2 supports a central finding: the Digital Rupiah does not exist in a comprehensive legal vacuum. Its underlying legal authority is compatible with the statutory framework, while operational arrangements under the four frameworks remain either conditionally compatible or, in prospective retail scenarios, not yet assessable. The main tensions do not arise because the four frameworks are inherently incompatible; rather, they arise because different entities bear different legal obligations. KYC requires transaction traceability, whereas personal-data law imposes purpose limitation and data minimization. Bank secrecy prescribes conditions for lawful disclosure, while measures to mitigate bank funding risks must be balanced against inclusive access to financial services.

The principle of trust is grounded in relationships between banks and customers who deposit or invest funds. The prudential principle is expressly reflected, among other provisions, in Article 35 of Law No. 21 of 2008, which governs Islamic banks and Islamic banking units. KYC operates as a compliance mechanism for AML, CTF, and counter-proliferation financing, whereas bank secrecy protects specifically defined information under POJK No. 44 of 2024. Preserving these distinctions prevents the assessment matrix from treating every obligation as automatically binding on Bank Indonesia.

For Islamic commercial banks and Islamic banking units, the potential effects of retail CBDC on deposit funding and financing liquidity are comparable to those faced by conventional banks. They also intersect with fiduciary duties in fund management and the contractual structures governing Sharia-compliant deposits and investments. Articles 2 and 35 of Law No. 21 of 2008 provide a legal basis for assessing prudential practices and the compliance of Islamic banking activities. POJK No. 44 of 2024 expressly protects information relating to Investor Customers and their Investments, which is particularly relevant to Islamic investment accounts. From the perspective of the protection of wealth (*hifz al-mal*), safeguarding value, protecting user rights, and ensuring fair remedies merit particular attention. This is a general normative consideration, not a claim that a specific fatwa has determined that all CBDC designs comply with Sharia principles.[22]

If an Islamic bank acted as a retail CBDC intermediary, Sharia-compliant deposit and investment accounts would need to be distinguished from Digital Rupiah wallets representing a central-bank liability. Transfers from contract-based deposits to CBDC should be supported by informed consent, accurate records, and clearly defined customer rights. The treatment of interest, fees, intermediation contracts, and the investment of CBDC balances should not be presumed before the relevant design rules have been adopted. In wholesale arrangements, the principal

[22] Chairul Fahmi and Syarifah Riyani, 'ISLAMIC ECONOMIC ANALYSIS OF THE ACEH SPECIAL AUTONOMY FUND MANAGEMENT', *Wahana Akademika: Jurnal Studi Islam Dan Sosial* 11, no. 1 (July 2024): 1, https://doi.org/10.21580/wa.v11i1.20007.

issues concern the finality of interinstitutional settlement and operational compliance rather than transfers out of retail deposits.

C. Legal Challenges to Implementing the Digital Rupiah in Indonesia's Financial System

The assessment of legal challenges is grounded in the theory of legal certainty, which provides criteria for evaluating normative clarity, regulatory consistency, and predictability in the application of law. In the CBDC context, legal certainty concerns not only statutory authority to issue the Digital Rupiah but also its legal status, the distribution of institutional powers, and the rights and obligations of participating entities. Ambiguous or inconsistent norms may produce divergent interpretations, overlapping mandates, and uncertainty about liability when problems occur. The theory therefore provides a basis for identifying regulatory deficiencies and evaluating the measures needed to ensure a clear and coherent framework for the Digital Rupiah.[23]

The term "legal gap" is used narrowly in this analysis. A genuine legal vacuum exists where no norm governs a particular legal relationship; a need for technical regulation arises when legislation recognizes the relevant subject and delegates implementation to a competent authority; and interpretive or harmonization problems arise when different legal regimes govern different actors or protected interests. Articles 2 and 14A of the Currency Law already provide recognition and authority for the Digital Rupiah. It would therefore be inaccurate to assert that CBDC in Indonesia has no legal basis at all. The challenges identified in the reviewed materials concern the exercise of delegated issuance powers, the distribution of functions, settlement finality, and the allocation of remedies. These issues do not all constitute gaps in substantive law.

For Table 3, each legal issue is assessed against four dimensions of legal certainty: clarity of institutional authority, consistency across regulatory regimes, identification of rights and duties, and accountability mechanisms. Where a general rule already exists, the need for "further specification" does not mean that the law is absent. Nor does this doctrinal analysis establish that Digital Rupiah users have experienced losses caused by system failures. The incidents discussed below are hypothetical scenarios used to examine legal design and the allocation of responsibilities.

The distribution architecture determines the pathway through which users access services, but intermediaries' involvement should not be confused with the issuance of the Digital Rupiah. Under a direct model, Bank Indonesia would conceptually provide user access and act as the primary service point. Under an

[23] Sudikno Mertokusumo, *Mengenal Hukum: Suatu Pengantar*.

indirect or two-tier model, Bank Indonesia would remain the issuer or manager of digital central-bank money, while authorized banks or PSPs would handle onboarding, wallet provision, and user interactions. A hybrid model would allocate selected service and recordkeeping functions among different actors. These are possible governance models for normative assessment, not evidence that all have been implemented in Indonesia.

The distribution model also shapes legal relationships among Bank Indonesia, commercial banks, PSPs, and users. Where intermediaries participate in distribution, Bank Indonesia's issuance authority must be distinguished from banks' or PSPs' responsibilities for distribution and user services. Their participation does not alter the Digital Rupiah's status as a central-bank liability, but it may create additional legal relationships concerning service delivery, access management, and transaction execution. Regulations should therefore allocate responsibility at each operational stage, including user onboarding, transaction processing, system management, and problem resolution. This clarification is necessary to prevent overlapping mandates and accountability gaps when users incur losses.[24]

If a hypothetical retail transaction failed, users would ordinarily report the incident to their wallet-interface provider, while the infrastructure operator would investigate ledger and settlement status within its remit. Authentication and onboarding failures would fall within the service provider's functional responsibilities; processing failures within infrastructure operated by Bank Indonesia or its designated agent should be investigated by the relevant operator. CBDC-specific rules should specify who may correct balances, set investigation deadlines and evidentiary standards, and establish escalation procedures without restricting users' rights to seek legal redress.[25]

For duplicate entries or transactions disputed after being recorded as final, the ledger operator should provide reconciliation procedures and an audit trail, while the wallet provider should make complaint channels and transaction evidence available. In cases of lost access, the authentication provider's responsibilities would include account suspension, identity recovery, and prevention of unauthorized transactions; these issues should be distinguished from losses of value resulting from ledger errors. In the event of a data breach, responsibilities should be allocated according to the roles of the entity determining the purposes and means of processing (the controller) and the entity processing data on its behalf (the processor), together with the applicable notification and remedial duties under Law

[24] Bank for International Settlements, Legal Aspects of Retail Central Bank Digital Currencies.

[25] Jarmanisa et al., 'ANALYSIS OF RISK COVERAGE AGREEMENT BETWEEN PT. J&T AND AN INSURANCE COMPANY FOR DELIVERY OF CONSUMER GOODS IN THE CONTEXT OF KAFALAH CONTRACT', *JURISTA: Jurnal Hukum Dan Keadilan* 5, no. 2 (October 2021): 2, https://doi.org/10.22373/jurista.v5i2.11.

No. 27 of 2022. Contractual allocations of liability among operators cannot override statutory obligations.

In wholesale arrangements, complaints should be handled among participating institutions or through procedures established by participation agreements, rather than through retail-consumer mechanisms. Risk criteria and dispute-resolution procedures should therefore be tailored to wholesale arrangements. The proposed allocation of functions among Bank Indonesia, banks, and PSPs is a *de lege ferenda* recommendation rather than an assertion that CBDC-specific regulations already assign these liabilities.

Data protection presents a further challenge because digital transactions generate information that may reveal users' economic activities. Access and processing arrangements must be specified to ensure that transaction-monitoring requirements do not override privacy rights. Implementation of KYC and anti-money-laundering measures must likewise balance financial-crime prevention against public accessibility. Banking stability could also be affected by transfers from commercial-bank deposits into CBDC. If the Digital Rupiah were used not only for payments but also as a substantial store of value, it could affect banks' liquidity and intermediation functions. Bouis and colleagues suggest that CBDC design choices, including potential holding restrictions, are important for managing effects on banks' balance sheets.[26]

Disintermediation risk must be assessed by distinguishing the Digital Rupiah's use as a means of payment from its use as a store of value. CBDC used primarily for payment settlement does not necessarily have the same implications as CBDC used to hold large balances. If members of the public transferred substantial deposits from bank accounts into the Digital Rupiah, commercial banks could lose an important source of funds for lending and financing. Such a shift could affect banks' funding structures, liquidity management, and intermediation capacity. CBDC regulation should therefore account for the proposed holding and usage characteristics, including possible balance limits and proportionate mitigation measures. The objective is to realize the efficiency gains of digital payments without undermining banking stability.[27] Cybersecurity, consumer protection, and dispute resolution are equally integral to implementation. System disruptions, loss of access, unauthorized transactions, and data breaches could expose users to financial harm. Clear rules are therefore needed to govern operator

[26] Romain Bouis, Gaston Gelos, Fumitaka Nakamura, Paavo A. Miettinen, Erlend Nier, and Gabriel Soderberg, Central Bank Digital Currencies and Financial Stability: Balance Sheet Analysis and Policy Choices, IMF Working Paper No. WP/24/226 (Washington, DC: International Monetary Fund, 2024), https://doi.org/10.5089/9798400290794.001 (accessed 2 November 2026).

[27] Nyffenegger, "Central Bank Digital Currency and Bank Intermediation".

liability, complaint handling, compensation, other remedies, and dispute-resolution procedures.

Effective protection for Digital Rupiah users requires more than a channel for submitting complaints; it also requires legal certainty about transaction status when systems malfunction. Delayed, unprocessed, incorrectly recorded, or disputed transactions must be subject to clear investigation and correction procedures. Operators should be able to trace transaction histories, verify transfers of value, and take corrective action when processing errors are confirmed. Responsibilities assigned to Bank Indonesia, commercial banks, and PSPs should reflect their actual functions within the system.[28] Procedures for incident response, service restoration, complaint handling, and dispute resolution are essential to effective legal protection. System security and reliability are therefore not merely technical characteristics; they also form part of the legal framework for protecting users.

Another challenge concerns institutional coordination among Bank Indonesia, the Financial Services Authority (OJK), the Financial Transaction Reports and Analysis Center (PPATK), the personal-data protection authority, and law-enforcement agencies. Coordination is necessary to prevent overlapping mandates or regulatory gaps in supervision, investigation, and enforcement. Effective implementation of the Digital Rupiah therefore requires a clear allocation of authority and information-sharing mechanisms consistent with confidentiality and personal-data protection requirements.

This analysis demonstrates that different categories of regulatory deficiency have distinct legal consequences and require different responses. Table 3 maps the relationships among legal issues, existing norms, categories of regulatory need, associated risks, and proposed measures.

Table 3: **Mapping Existing Norms, Categories of Regulatory Need, and Proposed Digital Rupiah Measures**

Issue	Existing norms	Classification of regulatory need	Legal consequences and indicators	Specific recommendation
Status and issuance	Law 7/2011 as amended by Law 4/2023, Arts 2 and 14A; PBI 3/2026, Art. 3	Delegated technical rules for issuance, design, and circulation; statutory recognition is already established.	BI's authority is clear, but procedures, access arrangements, and settlement finality require further assessment.	Specify rules under Article 14A(5), stages and types of development, issuance procedures, and settlement finality.

[28] Chairul Fahmi and Wira Afrina, 'ANALYSIS OF LEGAL ASPECTS ON DEBT TRANSFER FROM CONVENTIONAL BANK TO SHARIA BANK POST THE APPLICATION OF QANUN ACEH NO. 11 OF 2018', *Al-Mudharabah: Jurnal Ekonomi Dan Keuangan Syariah* 4, no. 1 (July 2023): 1.

DOI: https://doi.org/10.22373/sbadv936

Issue	Existing norms	Classification of regulatory need	Legal consequences and indicators	Specific recommendation
Access and distribution	Bank Indonesia Law; PBI 10/2025 for payment-system entities	Interpretation and specification of powers under direct, indirect, and hybrid models; clarification of boundaries with existing services.	Responsibilities for user rights, onboarding, and ledger operations may remain insufficiently allocated.	Allocate BI–bank/PSP functions; establish service, reconciliation, and escalation standards.
CDD/KYC and AML/CTF	POJK 8/2023 for financial services; PBI 10/2024 for non-bank entities within its scope	CBDC-specific risk rules for participants and intermediaries; general CDD obligations already exist.	Clarity regarding obliged entities, grounds for verification, data retention, and monitoring.	Map obliged entities by activity; introduce tiered KYC only where consistent with existing CDD duties.
Bank secrecy and personal data	POJK 44/2024, Arts 2–4; Law 27/2022, Arts 16 and 20	Harmonize the subject matter of bank secrecy with personal-data obligations and flows of ledger metadata.	Data-subject rights, Islamic investment-customer confidentiality, and lawful disclosures.	Classify data; identify controllers and processors; establish role-based access controls and audits.
Bank funding risks	Banking Law; Law 21/2008, Art. 35; P2SK Law, Art. 14A(3)	Assessment of a prospective retail design rather than a finding about actual implementation.	Potential reductions in bank deposits or liquidity; relevant prudential indicators.	Stress testing, holding limits where appropriate, and mitigation for Islamic and conventional banks.
Incidents and disputes	Law 27/2022; PBI 10/2025; relevant BI consumer-protection provisions	Specific procedures for participation, settlement finality, and the restoration of value.	Clearly designated complaint recipients, evidentiary requirements, compensation mechanisms, and dispute-resolution pathways.	Incident-specific procedures: failed transactions, duplicate entries, loss of access, and data breaches.

Issue	Existing norms	Classification of regulatory need	Legal consequences and indicators	Specific recommendation
Coordination among authorities	Bank Indonesia Law; OJK Law; P2SK Law; sector-specific POJK and PBI	Harmonize cross-institutional requirements for reporting, examination, and disclosure.	Risks of overlapping mandates or gaps in oversight.	Establish BI–OJK–PPATK and data-protection authority protocols grounded in clearly defined access powers.

Table 3 evaluates each challenge against existing law rather than describing an issue as "unclear" without identifying its normative basis. The clearest regulatory need concerns the implementing rules delegated under Article 14A(5), followed by the harmonization of intermediary responsibilities and transaction-data governance. The analysis does not establish a comprehensive legal vacuum. Assessments of legal certainty may change if further Digital Rupiah instruments or participant arrangements enter into force after the study's cut-off date.

A layered regulatory approach is therefore recommended. First, rules governing issuance and management should be adopted under Article 14A(5) of the Currency Law. Second, implementing rules and participation agreements should address settlement finality, access, recording errors, and remedies. Third, entities subject to customer due diligence should be identified under POJK No. 8 of 2023 or PBI No. 10 of 2024, rather than assuming that all actors bear identical obligations. Fourth, data-sharing protocols should distinguish bank secrecy, personal data, and lawful access by public authorities. For retail designs that remain undecided, assessments of potential effects on deposits held by conventional and Islamic banks, evaluations of holding limits, and proposed dispute-resolution procedures should inform detailed operational regulation.

Overall, the findings distinguish three analytical levels. At the level of legal recognition, the P2SK Law establishes the Digital Rupiah's status and Bank Indonesia's corresponding authority. At the regulatory level, institutional design and the responsibilities of participating entities require further specification in implementing instruments. At the implementation level, the documented progress of Project Garuda remains at the reported wholesale PoC stage. The proposed regulatory approach therefore does not seek to establish legality anew; instead, it prioritizes settlement finality, risk controls, data rights, complaint-handling arrangements, and remedies allocated according to each actor's functions.

CONCLUSION

First, the Digital Rupiah is expressly recognized as a form of Rupiah under Law No. 7 of 2011 on Currency, as amended by Law No. 4 of 2023. Article 14A authorizes Bank Indonesia to manage the Digital Rupiah and delegates the development of further issuance rules. Although PBI No. 3 of 2026 confirms its classification, it does not comprehensively regulate the technical operation of CBDC. The principal legal challenge is therefore not the absence of a statutory basis but the need for more detailed implementing regulations to ensure operational certainty and clear accountability among participating institutions.

Second, the assessment under four banking-law frameworks indicates that the Digital Rupiah remains conditionally compatible in several operational and institutional respects. Prudential requirements are established in banking law, whereas customer due diligence obligations depend on the activities and legal status of the obliged entity under POJK No. 8 of 2023 or PBI No. 10 of 2024. Similarly, bank secrecy applies within the institutional scope and to the protected information defined by POJK No. 44 of 2024, while personal-data protection is governed separately by Law No. 27 of 2022. Wholesale CBDC can be assessed against the documented PoC stage and rules applicable to institutional participants. By contrast, retail onboarding, potential transfers out of bank deposits, and compensation mechanisms cannot yet be assessed conclusively because the relevant design features and CBDC-specific rules remain unsettled. These findings underscore the need to assign duties to the appropriate legal actors and distribution models, particularly when balancing KYC requirements against privacy and broader access against banking stability.

Third, four regulatory priorities follow from the analysis: (1) specifying issuance procedures under Article 14A(5) of the Currency Law and clarifying settlement finality; (2) allocating functions and liabilities among Bank Indonesia, banks, and PSPs, including user rights under each distribution model; (3) developing protocols for customer due diligence, bank secrecy, and personal-data protection according to each actor's legal status and obligations; and (4) establishing standards for complaints, evidence, reconciliation, and remedies tailored to different types of incidents. Where Islamic banks act as intermediaries, these measures should also address deposit funding, financing liquidity, and the contractual basis of services. This doctrinal study is limited to legal materials available up to 11 November 2026; it does not empirically assess implementation effectiveness, effects on bank deposits, or the Sharia compliance of CBDC designs that have not yet been finalized. Future research should evaluate prospective retail arrangements and the responses of banks and users once detailed regulations and implementation data become available.

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