RWA Tokenization Risk

Assessment Criteria (Request for Comments)

Scope of the Criteria

Lianhe Ratings Global Limited ("Lianhe Global") applies the real-world asset ("RWA") tokenization risk assessment criteria to evaluate how tokenization affects the security and reliability of tokenized RWAs and incorporate the assessment into the ratings of RWAs.

RWAs refer to tangible or traditional financial assets that exist outside the digital realm, such as real estate, commodities, stocks, bonds, and loans. RWA tokenization typically involves converting RWAs into digital tokens, enabling the management and exchange of these assets on the blockchain. While this innovation enhances accessibility and efficiency, it may also introduce new risks. This assessment framework focuses on evaluating the potential risks introduced by digitalization of debt-like RWAs, such as tokenized bonds, asset-backed securities, and other fixed-income instruments and funds.

Lianhe Global has developed the assessment framework for RWA tokenization based on our knowledge and experience. The criteria do not represent a comprehensive coverage but only address key factors which we consider are important for assessing the potential impact of tokenization on underlying assets. The tokenization market is continuously evolving and the assessment framework or some elements of the criteria may not adequately address the emerging risk characteristics. Lianhe Global continues to look at the tokenization market development and may revise the criteria when we deem it necessary.

Lianhe Global may form our opinion based on limited information or may decide not to conduct the assessment if we deem the available information insufficient. Also, we may not always be able to identify errors or omissions.

Lianhe Global invites market participants to provide comments and feedback on the proposed criteria by 26 August 2025 by submitting their comments and feedback to info@lhratingsglobal.com. As per the proposed assessment framework, we do not expect the publication of the final criteria to result in any changes to our existing ratings.

RWA Tokenization Risk Modifier Framework

Lianhe Global applies a **Tokenization Risk Modifier ("TRM")** to incorporate tokenization-related risks into the ratings of RWAs, such as issuance credit ratings, money market fund ratings, and bond fund credit quality ratings. The TRM reflects the nature and severity of risks identified and ranges from "Neutral" to "Significant Risk", with corresponding rating adjustments.

The TRM is determined through a holistic evaluation of the following five key risk dimensions:

1. Legal and Regulatory Framework

Evaluates the enforceability of tokenized ownership rights and compliance with applicable regulations. Risks may arise from unclear legal recognition, cross-jurisdictional inconsistencies, or lack of regulatory engagement.

2. Technology Reliability

Assesses the security, resilience, and auditability of blockchain infrastructure and smart contracts. Weaknesses typically include unaudited code, limited scalability, and exposure to cyber threats or operational failures.

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3. Operational Risk

Focuses on the reliability of token issuance, redemption, and settlement processes. Risks include delayed redemptions, unclear terms, and lack of contingency planning, which may disrupt investor access to underlying assets or impair platform functionality.

4. Ownership and Custody

Examines the security of asset custody and token holder rights. Risks may arise from unregulated custodians, poor segregation of assets, or opaque ownership structures.

5. Track Record

Focuses on negative historical indicators such as regulatory sanctions, legal disputes, and operational failures. These signals may suggest elevated tokenization risk and reduce investor confidence.

TRM Scale and Rating Impact

TRM Level	Description	Rating Impact
Netural	Tokenization introduces minimal or no additional risk. Legal, technical, and operational frameworks are well-established and appropriately managed.	No adjustment to the rating
Moderate Risk	Tokenization introduces moderate risk, such as constrained redemption mechanisms or technology concerns, which may adversely affect asset security or redemption	Lower the rating by one notch
Significant Risk	Tokenization introduces significant risk, such as unclear ownership rights, weak cybersecurity, or adverse track record, which may materially impair asset security or redemption.	Lower the rating by two notches or more

Key Considerations for TRM

Legal and Regulatory Framework

Legal and Regulatory Framework assesses the extent to which the tokenized structure is supported by clear and enforceable legal rights and complies with applicable regulations. A strong legal foundation ensures that token holders have legitimate claims to the underlying assets and that the tokenization process is recognized by relevant authorities. Jurisdictional clarity is particularly important for cross-border assets, as differences in legal interpretation may create uncertainty. The presence of regulatory licenses, legal opinions, and compliance with financial and securities laws are key indicators of strength in this area.

Weaknesses in this factor may arise when tokenized ownership is not legally equivalent to traditional asset ownership, or when the regulatory environment is still evolving. In such cases, investors may face challenges in asserting their rights or recovering assets in the event of disputes or insolvency.

Technology Reliability

Technology Reliability focuses on the robustness, security, and auditability of the blockchain infrastructure and smart contracts used in tokenization. A secure and well-tested technology stack is critical to ensuring the integrity of token issuance, transfers, and redemptions. This includes evaluating the blockchain's consensus mechanism, uptime history, scalability, and resistance to cyberattacks.

Smart contracts should be independently audited and designed to handle edge cases and failures gracefully. The ability to upgrade or patch smart contracts without compromising asset security is also important. Platforms that rely on untested or proprietary technology may be more vulnerable to bugs, exploits, or operational disruptions, which can directly impact the creditworthiness of the tokenized asset.

Operational Risk

Operational Risk evaluates the reliability and efficiency of the systems and processes that support the full lifecycle of tokenized RWAs, including issuance, redemption, and settlement. A robust operational framework ensures that token holders can transact seamlessly, redeem assets promptly, and rely on consistent servicing. The assessment considers whether redemption mechanisms are clearly defined, executed on time, and supported by transparent procedures. Platforms with well-documented workflows, automated processes, and strong governance structures are viewed more favorably.

Elevated operational risk may arise from delayed or inconsistent redemptions, vague redemption terms, or bottlenecks in settlement processes. Additional concerns include lack of contingency planning, insufficient internal controls, and poor responsiveness during system disruptions. Historical incidents such as service outages or redemption failures are key indicators of operational fragility. A resilient and well-managed operation is essential to maintaining investor confidence and ensuring the stability of tokenized financial instruments.

Ownership and Custody

Ownership and Custody evaluates how securely the underlying assets are held and how token ownership is managed. Custody arrangements should ensure assets are segregated, protected, and verifiable, ideally managed by regulated entities with robust access controls. The assessment also considers whether token holders have legally enforceable rights to the underlying assets. Weaknesses may arise when custody is handled by unregulated entities or when ownership structures are opaque or poorly documented.

Track Record

Track Record focuses on the presence of adverse historical indicators that may undermine the credibility and reliability of the issuer or platform managing tokenized RWAs. Key concerns include regulatory sanctions, unresolved legal disputes, operational failures such as redemption delays or service outages, and persistent negative market sentiment. These signals suggest elevated tokenization risk and may indicate weaknesses in governance, transparency, or investor protection, warranting a more cautious approach in rating assessments.

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