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Bank for International Settlements

By online submission

Dear Sir/Madam

Re: BIS Consultation Paper on Cryptoasset standard amendments

We welcome the opportunity to provide input to this BIS Consultation paper on the proposed amendments to the standard prudential treatment of banks' exposures to cryptoassets. The EMA represents FinTech, BigTech and technology firms engaging in the provision of alternative digital payment services, including the issuance of e-money, e-money tokens, and cryptoassets.

Our members include leading payments and e-commerce businesses providing online payments, card-based products, electronic marketplaces, and increasingly cryptocurrency exchanges and other cryptocurrency related products and services. The EMA has been operating for over 20 years and has a wealth of experience regarding the regulatory framework for electronic money and payments. A list of current EMA members is provided at the end of this document. We have a monthly cryptoasset working group that meets to discuss issues of regulatory significance for the cryptoasset sector.

We would be grateful for your consideration of our comments, which are set out below.

Yours faithfully,

A handwritten signature in black ink, reading 'Thaer Sabri', with a long horizontal line extending from the end of the signature.

Dr Thaer Sabri
Chief Executive Officer
Electronic Money Association

Opening Statement

1. The EMA is grateful for the opportunity to engage with the proposed amendments to the Cryptoasset standard. We recognise the pivotal role this standard will play in shaping the prudential treatment of banks' exposures to cryptoassets. Below, we present our comprehensive views, starting with some overarching comments that encapsulate our perspective on the proposed changes, followed by a detailed analysis tailored to each specific amendment.

MiCAR Considerations

2. Building on the principle that regulated stablecoins subject to ongoing supervision and a prudential regime, including equivalent capital, liquidity, and governance requirements, meet the critical conditions for financial stability and integrity, the framework should allow and give preferential treatment to MiCAR-compliant cryptoassets.
3. This applies specifically to stablecoins which should be included in the Group 1b category. This approach is supported by the following arguments:
4. **Regulatory Compliance and Stability:** MiCAR-compliant stablecoins offer a high level of regulatory compliance, adhering to stringent capital, liquidity, and governance standards akin to those applied to traditional financial instruments. This compliance ensures these assets are stable and reliable enough for inclusion in banks' reserve portfolios, mitigating risks associated with volatility and operational integrity.
5. **Portfolio Diversification:** The inclusion of regulated stablecoins as part of banks' reserve assets enables a diversification of reserves. This diversification is crucial for reducing systemic risk, as it lessens dependence on traditional, potentially more volatile reserve assets. The inherent stability of these stablecoins, when regulated, provides a safe option for diversifying reserves without introducing additional risk.
6. **Promotion of Financial Innovation:** Encouraging the adoption of MiCAR-compliant stablecoins fosters innovation within the banking sector. This move recognizes the evolving landscape of digital finance and the growing importance of digital assets. It positions banks to leverage blockchain technology, enhancing the efficiency and security of financial transactions and paving the way for new banking products and services.
7. **Signal of Legitimacy and Confidence:** By giving preferential treatment to these regulated stablecoins, the BIS would signal to the global financial community the legitimacy of digital assets that meet high regulatory standards. This endorsement could increase confidence in digital finance, encouraging further investments and the development of the sector.
8. In summary, the BIS's support for MiCAR-compliant stablecoins as reserve assets aligns with its mission to ensure global financial stability. This focused approach on regulated stablecoins highlights the importance of regulatory compliance, financial stability, liquidity management, and innovation, offering a clear rationale for their inclusion and preferential treatment in the reserve portfolios of banks.

The use of permissionless blockchains in Group 1

9. There appears to be significant scepticism towards the integration of permissionless blockchains into Group 1 of bank reserves. In the Introduction section of the consultation paper, the Committee states that the use of permissionless blockchains gives rise to a number of unique risks, some of which cannot be sufficiently mitigated at present. As such, no adjustments to the cryptoasset standard to allow for the inclusion of cryptoassets that use permissionless blockchains is envisioned.
10. However, it is important to bear in mind that the decentralized nature of permissionless blockchains is fundamentally designed to distribute risks and responsibilities across a vast network, mitigating the dependence on single entities or centralized third parties. This distribution not only enhances the resilience and security of the financial operations but also democratizes access and oversight, allowing for a new paradigm of due diligence and risk management.
11. Technological advancements, particularly in blockchain analytics and cryptographic methods, are constantly improving the capacity to address and mitigate concerns around anti-money laundering (AML), counter-financing of terrorism (CFT), privacy, and liquidity. Tools capable of tracing transactions and identifying patterns of illicit activities have become more sophisticated, making permissionless blockchains increasingly compliant with regulatory standards. Moreover, innovations like smart contracts and decentralized finance (DeFi) platforms are pioneering solutions for settlement finality and liquidity issues, demonstrating that many of the perceived unmitigable risks are already being effectively addressed.
12. The global and unregulated aspects of permissionless blockchains, often seen as liabilities, also imbue these systems with a high degree of adaptability and resilience to localized political or policy shifts. As regulatory frameworks around cryptocurrencies and blockchain technology continue to evolve, there is a clear pathway toward mitigating legal and policy risks. The blockchain community's commitment to innovation and collaboration with regulatory bodies suggests permissionless blockchains can be safely integrated into mainstream financial operations, including Group 1 bank reserves, benefiting from their inherent efficiencies and advancements. As such, we would advise a reconsideration of the current stance to entirely exclude them.

EMA Response to Proposed amendments

Availability on request of banks' assessment of stabilisation mechanisms

The amendment *“The stabilisation mechanism enables risk management similar to the risk management of traditional assets, based on sufficient data or experience. For newly established cryptoassets, there may be insufficient data and/or practical experience to perform a detailed assessment of the stabilisation mechanism. Banks must document and make available to supervisors on request the assessment they conducted, and the evidence used to determine Evidence must be provided to satisfy supervisors of the effectiveness of the stabilisation mechanism, including the composition, valuation and frequency of valuation of the reserve asset(s) and the quality of available data.*

Technical and Operational Implications

11. The requirement underscores the need for banks to undertake a rigorous and comprehensive assessment of the stabilization mechanisms of cryptoassets. This involves not just a superficial evaluation but a deep dive into the mechanism's design, its historical effectiveness, and its ability to manage risks analogous to those encountered in traditional financial instruments. The technical challenge presented by such a requirement is significant, especially for newly established cryptoassets where historical data and practical experience are limited. Banks might need to develop new methodologies or rely on advanced statistical and financial modelling techniques to assess the effectiveness of such mechanisms.
12. The mandate for documentation and transparency serves multiple purposes: it ensures that banks maintain a detailed record of their due diligence processes, provides supervisors and regulators with the necessary information to evaluate the banks' exposure to cryptoasset risks, and indirectly encourages a culture of rigorous risk management within banks. However, the requirement to make these assessments available to supervisors upon request also implies a substantial operational burden, necessitating the creation of standardized documentation processes and potentially sophisticated systems for storing and retrieving relevant information.

Regulatory and Compliance Considerations

13. This provision implies a dynamic and potentially iterative engagement between banks and regulators. The phrase "upon request" suggests that supervisors and regulators may not need to review every assessment proactively but can target their inquiries based on perceived risk levels or areas of concern. This approach allows for flexibility but also places a premium on the quality of the initial documentation and the readiness of banks to engage in detailed discussions about their assessments.

Market Impact and Strategic Considerations

14. By imposing stringent requirements on the assessment and documentation of stabilization mechanisms, the amendment may inadvertently affect the pace of innovation in the cryptoasset space. While the primary intention is to ensure the safety and soundness of the banking sector's exposure to cryptoassets, there is a risk that overly burdensome regulatory requirements could stifle innovation or deter banks from

engaging with cryptoassets. Striking the right balance between rigorous oversight and the encouragement of responsible innovation will be a key challenge.

15. This requirement may lead to a further differentiation among cryptoassets in the eyes of banks and regulators, distinguishing those with well-documented, effective stabilization mechanisms from those without. Over time, this could influence the development of best practices in the design and management of stabilization mechanisms, potentially leading to a more mature and resilient market for stablecoins and other cryptoassets.

Composition of reserve assets

The amendment "(a) *The reserve assets must be comprised of assets with minimal market and credit risk* *where:*

(i) the reserve assets should mainly consist of assets with short-term maturities and high credit quality; and

(ii) the reserve assets have a proven record of relative stability of market terms (e. g. low volatility of traded prices and spreads) even during stressed market conditions."

Financial Stability and Risk Management Implications

Short-term Maturities and High Credit Quality:

16. The requirement for reserve assets to have short-term maturities and high credit quality reflects a risk-averse stance, which aims to minimize the interest rate and credit risk inherent in longer-dated securities or lower-rated issuers. Short-term, high-quality assets are generally less volatile and more liquid, characteristics that are crucial for the quick mobilization of assets in response to redemption demands. However, this conservative approach may limit the yield potential of reserve assets, potentially impacting the economic viability of certain stablecoin models where returns on reserves are a component of the business model. Moreover, the focus on short-term maturities could exacerbate demand for these assets, impacting broader market dynamics, especially in environments of limited supply.

Stability of Market Terms:

17. The requirement for reserve assets to have a proven record of stability in market terms, including low volatility of traded prices and spreads, can help to ensure that these assets can be liquidated without significant market impact, even during periods of stress. This condition implicitly acknowledges the interconnectedness between the stability of stablecoins and the broader financial system, mitigating scenarios where forced liquidation of reserve assets could exacerbate market turbulence. The technical challenge here lies in quantitatively defining and assessing "proven record of stability," which requires a comprehensive analysis of historical performance under various market conditions. This could introduce a level of subjectivity or require the adoption of standardized benchmarks for stability assessment.

Operational and Compliance Considerations

Assessment and Documentation Burden:

18. The criteria set forth for reserve assets impose a significant assessment and documentation burden on issuers and participating banks. They must not only select and manage reserve assets that meet these stringent criteria but also continually monitor and document compliance, including the ability to demonstrate the stability of these assets under stress scenarios. This requirement necessitates sophisticated risk management and compliance infrastructures, which could be particularly challenging for smaller or less sophisticated issuers.

Dynamic Market Conditions:

19. The stipulation that reserve assets must exhibit stability even under stressed market conditions introduces a dynamic element to compliance. Assets that are considered stable under current market conditions may not necessarily maintain this status indefinitely, requiring ongoing reevaluation of reserve compositions. This dynamic nature complicates risk management strategies, potentially leading to more conservative asset selection and increased liquidity buffers, further impacting the cost structure of issuing and maintaining stablecoins.

Market Impact and Strategic Considerations

Influence on Asset Selection and Liquidity Management:

20. Issuers might be incentivized to concentrate on a narrow range of highly liquid, short-term assets from top-rated issuers or sovereigns, potentially leading to concentration risk and diminished diversification benefits. While this might enhance stability, it could also lead to increased correlation with certain market segments, raising questions about systemic risks in scenarios where multiple stablecoins hold similar asset portfolios.

Strategic Implications for Issuers:

21. The stringent criteria for reserve assets might influence the strategic positioning of stablecoin issuers, favoring those with access to sophisticated risk management tools and capabilities. This could create barriers to entry for new issuers and potentially drive consolidation in the stablecoin market. Moreover, the emphasis on stability and liquidity might shape the development of new stablecoin products, with issuers exploring innovative mechanisms to meet regulatory requirements while optimizing returns.

Liquidity and “instant” redemptions

The amendment “(b) The reserve assets ~~shall~~ **must** be capable of being liquidated rapidly with minimal adverse price effect **where**:

- (i) *the reserve assets have a proven record as a reliable source of liquidity in the markets even during stressed market conditions, and those that are marketable securities are traded in large, deep and active markets;*
- (ii) *if the price of a reserve asset is determined by a pricing formula, the formula must be easy to calculate and not depend on strong assumptions. The inputs into the pricing formula must also be publicly available;*
- (iii) *the reserve assets provide sufficient daily liquidity to meet “instant” redemption requests from the cryptoasset holders; and*
- (iv) *the reserve assets are placed in structures that are bankruptcy remote from any party that issues, manages or involved in the stablecoin operation, or custodies the reserve assets.”*

Proven Record of Liquidity and Market Depth

Implications:

22. Requiring reserve assets to have a proven record as a reliable source of liquidity, especially under stressed market conditions, ensures that stablecoin issuers can meet redemption demands without precipitating market disruptions. Marketable securities must be traded in large, deep, and active markets, which theoretically reduces the market impact of liquidation events. However, this requirement poses challenges, particularly in identifying assets that consistently meet these criteria across different market cycles. It may also limit the universe of eligible reserve assets, potentially concentrating exposure to certain asset classes or issuers that fulfill these conditions.

Challenges:

23. The operationalization of "proven record" criteria necessitates robust historical analysis and ongoing monitoring, potentially requiring sophisticated analytics and market intelligence capabilities. Moreover, defining and quantifying liquidity in "stressed market conditions" introduces ambiguity, as liquidity is inherently variable and context-dependent. Issuers must navigate these complexities while ensuring compliance.

Pricing Formula Transparency and Simplicity

Implications:

24. The mandate for reserve assets' pricing formulas to be simple, easily calculable, and based on publicly available inputs aims at enhancing transparency and verifiability. This requirement mitigates risks associated with opaque or complex valuation mechanisms, which could obscure true asset values and impair risk assessment by both issuers and regulators. It favors plain-vanilla assets over structured or exotic securities, which might offer higher yields but pose greater valuation challenges.

Daily Liquidity for "Instant" Redemptions

Implications:

25. The expectation that reserve assets provide sufficient daily liquidity to meet instant redemption requests underscores the importance of real-time liquidity management in stablecoin operations. This requirement reflects the need to align stablecoin liquidity profiles with user expectations of instantaneity, a hallmark of digital asset ecosystems. Ensuring daily liquidity necessitates careful asset selection and liquidity risk management, including contingency planning for extreme redemption scenarios.

Challenges:

26. Maintaining daily liquidity under all market conditions is a high bar, particularly during periods of financial stress when asset sell-offs can lead to market-wide liquidity contractions. Issuers may need to overcollateralize holdings or maintain significant cash buffers, which could impact the economic efficiency of stablecoin operations. Developing and implementing liquidity management strategies that accommodate the dual needs for instant redemption and capital efficiency poses a significant operational challenge.

Bankruptcy Remoteness

Implications:

27. Requiring that reserve assets be held in structures remote from bankruptcy risks associated with any party involved in the stablecoin's issuance, management, or custody safeguards the assets from creditors in the event of a legal entity's financial distress. This structural protection is crucial for maintaining stablecoin integrity and user trust, ensuring that reserve assets are exclusively available to meet redemption claims.

Challenges:

28. Achieving bankruptcy remoteness involves legal and structural complexities, including the creation of special purpose vehicles (SPVs) or trust arrangements that can segregate assets effectively. These structures must be meticulously designed to comply with legal requirements in multiple jurisdictions, which can be both time-consuming and costly. Furthermore, operationalizing such structures requires careful governance and oversight to ensure ongoing compliance with the intended bankruptcy remoteness.

Eligible types of reserve assets:

The amendment “(c) *Eligible types of reserve assets include, but not limited to:*

(i) central bank reserves to the extent that the stablecoin issuer is eligible and the central bank policies allow them to be drawn down in times of stress;

(ii) marketable securities representing claims on or guaranteed by sovereigns and central banks with high credit quality; and

(iii) deposits at high credit quality banks with safeguards, such as: a concentration limit applied at group level that include entities with close links; bankruptcy remoteness of the deposits from any party that issues, manages or is involved in the stablecoin operation; and the banks apply the Basel Framework (including the liquidity coverage ratio).

National supervisors may include other types of assets which fulfil the asset quality criteria for reserve assets as outlined above.”

Central Bank Reserves

Implications:

29. Allowing central bank reserves as eligible reserve assets, subject to eligibility and policy conditions, underscores a preference for the highest safety and liquidity standards. Central bank reserves are essentially risk-free, offer immediate liquidity, and their inclusion as reserve assets could significantly enhance the stability and credibility of stablecoins. This provision also opens the door to a more formal integration of stablecoins within the traditional financial ecosystem, potentially paving the way for future regulatory and operational synergies.

Challenges:

30. The eligibility criterion and the requirement that central bank policies must permit drawdowns in times of stress introduce significant constraints. Not all stablecoin issuers have access to central bank reserves, as this typically requires banking licenses or specific regulatory approvals.
31. Moreover, central banks may be cautious in allowing such arrangements, given the potential for systemic risk implications. The feasibility of utilizing central bank reserves thus depends heavily on the regulatory and operational landscape, which may vary significantly across jurisdictions.

Marketable Securities

Implications:

32. The inclusion of marketable securities representing claims on or guaranteed by sovereigns and central banks with high credit quality as eligible reserve assets reflects a pragmatic approach. These securities combine safety with relatively high liquidity and market depth, making them suitable for stablecoin reserves intended to be liquid and

stable. This category leverages existing financial instruments that are well-understood and widely used in traditional financial operations, facilitating risk assessment and management.

Challenges:

33. While sovereign and central bank securities are generally considered safe, their market values can still fluctuate due to interest rate movements, sovereign credit events, or market liquidity conditions. Thus, managing the interest rate and credit risk of these securities is essential, especially for stablecoins pegged to a stable value. Furthermore, the reliance on marketable securities could expose stablecoin operations to market liquidity conditions, requiring careful liquidity management and contingency planning.

Deposits at High Credit Quality Banks

Implications:

34. The criterion that reserve assets can include deposits at high credit quality banks, subject to specific safeguards, strikes a balance between safety and operational flexibility. Deposits provide straightforward, accessible liquidity and can earn interest, contributing to the economic sustainability of stablecoin operations. The specified safeguards, including concentration limits, bankruptcy remoteness, and adherence to the Basel Framework, aim to minimize credit, counterparty, and operational risks associated with bank deposits.

Challenges:

35. Bank deposits, while relatively liquid, are not without risk. The credit quality of banks can change, and in times of systemic stress, even deposits at high-quality banks could become less liquid. The specified safeguards, particularly the application of concentration limits and ensuring bankruptcy remoteness, require sophisticated risk management and legal structuring. Additionally, reliance on bank deposits introduces an exposure to the traditional banking sector, which may not align with the decentralized ethos of some stablecoin initiatives.

National Supervisory Discretion

Implications:

36. Granting national supervisors the discretion to include other types of assets that fulfill the asset quality criteria is positive and acknowledges the diversity of financial markets and the need for regulatory flexibility. This provision allows for the adaptation of reserve asset criteria to local market conditions and financial systems, potentially facilitating innovation and the development of regionally tailored stablecoin solutions.

Challenges:

37. While flexibility is beneficial, it may lead to regulatory fragmentation, with stablecoins facing different reserve asset requirements in different jurisdictions. This could

complicate the management of global stablecoin operations and potentially limit the fungibility and universality of stablecoins across borders. Ensuring that diverse regulatory standards do not undermine the stability, liquidity, and safety objectives of reserve asset criteria will be a key challenge for both issuers and regulators.

Asset quality criteria

The amendment “*(3) Asset quality criteria for reserve assets for cryptoassets not pegged to currencies. For cryptoassets that are not pegged to currencies, the reserve assets must largely include asset(s) presenting the same risk profile of the reference assets. That means, the reserve assets should only include the reference assets, except for a de minimis portion of the reserve assets may be held in cash or bank deposit, provided that the holding is necessary for the operation of the cryptoasset arrangement.*”

Technical and Risk Management Considerations

Alignment with Reference Asset Risk Profiles:

38. The requirement that reserve assets must largely mirror the risk profile of the reference assets is a principle grounded in the concept of risk consistency. This approach aims to ensure that the volatility and market dynamics of the reserve assets are closely aligned with those of the cryptoasset they back. This alignment is critical for maintaining the stability and integrity of the cryptoasset, especially in the absence of a direct fiat currency peg. However, this alignment also means that the reserve assets will inherently carry the same market and credit risks as the reference assets, which could be significantly volatile or illiquid depending on the nature of the reference assets.

Challenges of Risk Profile Matching:

39. Identifying and acquiring reserve assets that match the risk profile of non-fiat-pegged cryptoassets can be technically and operationally challenging. For cryptoassets referencing commodities, digital assets, or other non-fiat benchmarks, the available pool of suitable reserve assets might be limited or subject to significant market fluctuations. This limitation could constrain the issuer's ability to manage the reserve effectively, particularly in terms of liquidity and market depth.

Operational Flexibility and Constraints

De Minimis Cash or Bank Deposit Holdings:

40. Allowing a de minimis portion of the reserves to be held in cash or bank deposits introduces a necessary element of operational flexibility. This provision recognizes the practical needs of managing cryptoasset operations, such as handling minor expenses or facilitating small-scale redemptions. However, the term "de minimis" is inherently vague and subject to interpretation. Defining what constitutes a de minimis portion will be crucial for both issuers and regulators to ensure that this flexibility does not compromise the overall risk alignment principle.

Operational Implications:

41. The operational realities of maintaining reserve assets that reflect the risk profile of non-fiat-pegged cryptoassets could be complex, especially in volatile or illiquid markets. The need to continually assess and adjust the composition of the reserve to ensure it remains aligned with the reference asset's risk profile introduces significant management overhead. Moreover, the allowance for a de minimis portion of cash or bank deposits, while providing flexibility, also necessitates rigorous internal controls and auditing processes to ensure compliance with this requirement.

Regulatory and Compliance Implications

Supervisory Oversight:

42. Regulatory bodies and supervisors will need to establish clear guidelines and monitoring mechanisms to ensure compliance with these asset quality criteria. This includes defining acceptable risk profile alignment methodologies, acceptable thresholds for de minimis cash holdings, and reporting requirements for reserve asset compositions. The subjective nature of "risk profile" and "de minimis" introduces a level of regulatory complexity and potential variability in how different jurisdictions interpret and enforce these criteria.

Market Impact:

43. These criteria could influence the market for certain reference assets and their corresponding reserve assets. For cryptoassets referencing unique or niche assets, the demand for corresponding reserve assets could affect their market dynamics. This impact underscores the need for careful market analysis and risk assessment by issuers and regulators alike to prevent unintended consequences in related asset markets.

Risk management framework

The amendment “(d) *An appropriate risk management framework exists to assess and monitor the risks of reserve assets, including but not limited to market risk, credit risk, concentration risk and liquidity risk. Examples include on-going monitoring of deposit counterparties and custodians, daily valuation of reserve assets, and stress testing.*

(e) *The composition and value of the reserve assets are publicly disclosed on a regular basis. The value and the outstanding amount of cryptoassets in circulation must be disclosed at least daily and the composition must be disclosed at least weekly. This disclosed information must be verified by an independent third party.*”

Risk Management Framework for Reserve Assets

Comprehensive Risk Assessment:

44. The requirement for an appropriate risk management framework to assess and monitor various risks associated with reserve assets (market, credit, concentration, and liquidity risk) underscores the comprehensive approach needed to safeguard the integrity of cryptoassets. Implementing such a framework involves sophisticated risk modeling and

analysis capabilities, which may include advanced statistical techniques, scenario analysis, and stress testing. This comprehensive risk management approach is critical for identifying potential vulnerabilities and implementing mitigating strategies proactively.

Operational and Technical Challenges:

45. The operationalization of this comprehensive risk management framework presents significant challenges. Ongoing monitoring of deposit counterparties and custodians requires robust due diligence processes and continuous oversight mechanisms. Daily valuation of reserve assets demands accurate and timely market data, as well as sophisticated valuation models, especially for assets that may not have readily available market prices. Stress testing reserve assets under various scenarios involves complex modeling that must account for extreme but plausible market conditions, requiring both technical expertise and significant computational resources.

Transparency and Public Disclosure

Enhancing Transparency and Trust:

46. Mandating the regular public disclosure of the composition and value of reserve assets, along with the outstanding amount of cryptoassets in circulation, will enhance transparency, foster trust among users and stakeholders, and facilitate regulatory oversight. These disclosure requirements ensure that market participants have access to critical information that can inform their investment decisions and risk assessments. The frequency of these disclosures (daily for value and outstanding amounts, weekly for composition) reflects a commitment to high transparency standards.

Verification by Independent Third Parties:

47. The stipulation that disclosed information must be verified by an independent third party at least semi-annually adds an additional layer of credibility and trustworthiness to the disclosed information. This external verification process is designed to ensure the completeness, fairness of valuation, and accuracy of the disclosed information, thereby providing stakeholders with assurance about the reliability of the data. However, this requirement also introduces complexities related to the selection of suitable independent verifiers, the scope of their audit or verification, and the methodologies used to assess fairness and accuracy.

Market and Regulatory Implications

Market Confidence and Regulatory Compliance:

48. The combined effect of the robust risk management framework and the rigorous transparency and disclosure requirements is likely to enhance market confidence in the stability and reliability of cryptoassets. By setting high standards for risk management and transparency, these provisions can contribute to the maturation and legitimacy of the cryptoasset market. However, they also set a high bar for regulatory compliance, potentially creating challenges for smaller issuers or those with limited resources.

Challenges of Implementation and Compliance:

49. Implementing the required risk management framework and adhering to the transparency and disclosure standards may require significant investment in systems, processes, and expertise. Cryptoasset issuers will need to balance the costs of compliance with these requirements against the benefits of enhanced trust and stability. Furthermore, the dynamic nature of the cryptoasset market and the evolving regulatory landscape may necessitate ongoing adjustments to risk management and disclosure practices.

Footnotes to SCO60.11

The amendments “[5] Supervisors may specify: (i) a maximum maturity limit for individual reserve assets; and/or (ii) a portfolio weighted average maturity limit for a pool of reserve assets. In case supervisors allow longer-term assets as reserve assets, the level of overcollateralisation should be sufficient to cover potential declines in those asset values so that the cryptoassets remains redeemable at all times for the peg value, even on stress period and volatile markets.

[6] These include: (i) marketable securities representing claims on or guaranteed by sovereigns or central banks with a low risk of default (eg subject to a 0% risk weight under the standardised approach to credit risk or equivalent; or subject to a non-0% risk weight to the extent that the cryptoasset is pegged to the domestic currency of the sovereign or central bank); and (ii) deposits at high-rated banks with a low risk of default.

[7] For example, securities referred to under LCR30.41(3) can be considered, as well as securities representing claims on or guaranteed by sovereign or central bank with a non-0% risk weight under the standardised approach to credit risk, to the extent that the cryptoasset is pegged to the domestic currency of that sovereign or central bank.

[8] In case of hedging, the collateral used in credit support annex agreements should be encumbered and be subtracted from what is considered the reserve asset funds.”

Maturity Limits and Overcollateralization

Implications for Liquidity and Interest Rate Risk:

50. Setting a maximum maturity limit for individual reserve assets and/or a portfolio-weighted average maturity limit is a prudent measure to control liquidity and interest rate risk. Shorter maturities generally imply lower interest rate risk and higher liquidity, key attributes for assets that might need to be liquidated quickly to maintain the cryptoasset's peg. The option for supervisors to allow longer-term assets, provided they are sufficiently overcollateralized, introduces flexibility but also requires rigorous assessment to ensure that overcollateralization levels are adequate to cover potential declines in asset values.

Challenges of Implementation:

51. Determining the appropriate level of overcollateralization for longer-term assets involves complex modeling, including stress testing and scenario analysis, to anticipate potential market movements. This process is further complicated by the need to adjust these

models as market conditions and interest rate environments change. For issuers, maintaining the required overcollateralization ratios could tie up significant amounts of capital, potentially affecting the profitability and operational efficiency of the cryptoasset scheme.

Asset Quality and Low Default Risk

High-Quality Asset Requirements:

52. The emphasis on marketable securities with low risk of default, such as those issued or guaranteed by sovereigns and central banks, underlines a conservative approach towards reserve asset quality. These assets typically offer high liquidity and stability, making them suitable for backing cryptoassets. The reference to assets being subject to a 0% risk weight under the standardized approach to credit risk underscores the preference for assets considered to carry minimal credit risk.

Market and Operational Considerations:

53. While the focus on high-quality assets enhances the safety and perceived stability of cryptoassets, it also limits the universe of eligible securities. This could lead to concentration risks if many issuers gravitate towards the same set of highly-rated sovereign or central bank securities. Additionally, in low interest rate environments, the yields on these high-quality assets could be minimal, challenging the financial sustainability of maintaining large reserves of such assets.

Hedging and Collateral Management

Hedging Strategies and Collateral Requirements:

54. The provision regarding the treatment of collateral in hedging activities acknowledges the complexity of managing risk in cryptoasset operations. Encumbering collateral used in credit support annex (CSA) agreements ensures that the value of hedged positions is protected. However, this also means that the encumbered assets cannot be counted towards the free reserve assets, potentially requiring issuers to hold additional assets to meet their reserve requirements.

Complexity and Compliance:

55. Managing hedging strategies and the associated collateral introduces significant complexity, requiring expertise in both financial risk management and the legal aspects of CSA agreements. Issuers must carefully balance their hedging activities to mitigate risks without overly encumbering assets, which could restrict their liquidity management capabilities. Compliance with these requirements necessitates robust systems for tracking and valuing encumbered assets and ensuring that hedging strategies are effectively reducing overall risk exposure.

Due diligence of stabilisation mechanism

The amendment “(3) For cryptoassets that are classified as Group 1b, a bank must perform due diligence to ensure that they have an adequate understanding, at acquisition and thereafter on a regular basis (at least [monthly/quarterly/annually]), of the stabilisation mechanism of the cryptoasset and of its effectiveness. As part of that due diligence, a bank must conduct statistical or other tests demonstrating that the cryptoasset maintains a stable relationship in comparison to a reference asset (basis risk test). Banks must make available to their supervisors upon request the results of such tests, and the supervisors may override the classification based upon the test results.”

Technical and Analytical Implications

Stabilization Mechanism Analysis:

56. The need for banks to understand the stabilization mechanism at acquisition and regularly thereafter demands a blend of financial, technical, and market analysis skills. This understanding goes beyond superficial assessments, requiring banks to dissect how the stabilization mechanism responds to market volatility, liquidity changes, and varying levels of trading activity. The requirement poses significant analytical challenges, especially for cryptoassets employing complex algorithms or smart contracts to maintain stability.

Statistical or Other Tests for Basis Risk:

57. Conducting statistical tests to demonstrate the stable relationship of the cryptoasset with a reference asset introduces a quantitative, empirical layer to the due diligence process. Basis risk, the risk that the value of the cryptoasset diverges from its reference asset, becomes a critical metric for assessing stabilization effectiveness. This necessitates the application of sophisticated statistical methods, possibly including cointegration tests, regression analysis, and volatility assessment models. Banks must develop or acquire specialized capabilities to conduct these analyses, interpreting results in the context of changing market dynamics and the unique characteristics of each cryptoasset.

Operational and Compliance Considerations

Regular Due Diligence Frequency:

58. The mandate for regular (monthly, quarterly, or annually) due diligence reflects an understanding that the stability of cryptoassets is not a static attribute but can fluctuate over time due to changes in market conditions, the cryptoasset's ecosystem, and regulatory environments. Determining the appropriate frequency for reassessment involves balancing the need for timely, accurate risk assessment with the operational burden of conducting these analyses. This balance may vary depending on the asset's volatility, the complexity of its stabilization mechanism, and the bank's risk appetite.

Transparency and Reporting Requirements:

59. Requiring banks to make the results of their tests available to supervisors upon request enhances transparency and enables regulatory bodies to have insight into the banks' risk management practices. However, it also imposes a reporting burden on banks, necessitating the maintenance of comprehensive, accessible records of their analyses. This requirement could lead to the standardization of reporting formats and methodologies across the industry, facilitating more straightforward regulatory oversight but also potentially stifling innovation in risk assessment methods.

Market and Regulatory Implications

Supervisor Override Authority:

60. Granting supervisors and regulators the authority to override the classification of a cryptoasset based on test results introduces a significant regulatory check on banks' internal risk assessments. This power ensures that regulatory standards for stability and risk management are met, protecting the financial system from potential systemic risks posed by misclassified assets. However, it also places substantial responsibility on regulators to interpret test results accurately and to make informed, timely decisions that reflect an understanding of the cryptoasset market's nuances.

Influence on Cryptoasset Innovation:

61. The rigorous due diligence and testing requirements could influence the development of stabilization mechanisms, possibly leading to greater standardization in design as issuers aim to meet the benchmarks established by banking industry practices. While this could enhance the overall stability and reliability of cryptoassets, there is also a risk that it may dampen innovation or discourage the creation of novel stabilization approaches that do not conform to established testing paradigms.

Risk-weighted asset formula

The amendment “Regarding a breach of the 1% limit, banks must calculate the RWA arising from its Group 2 cryptoassets using the following formula[14], where:

(1) A refers to the RWA for the bank’s exposure to Group 2 cryptoassets ignoring the impact of the breach of the 1% Group 2 exposure limit.

(2) B refers to the RWA for the bank’s exposures to Group 2 cryptoassets assuming all exposures (ie both Group 2a and Group 2b) are subject to the requirements that apply for Group 2b exposures, as set out in SCO60.83 to SCO60.86.

(3) Group 2 exposure refers to the exposure amount that is calculated in accordance with SCO60.119.

$$RWA = A + (B - A) \times \frac{\text{Group 2 exposure} - 1\% \text{ of Tier 1 capital}}{2\% \text{ of Tier 1 capital} - 1\% \text{ of Tier 1 capital}}$$

Footnotes:

[14] As an illustrative example of the formula set out in SCO60.118, consider a bank that has:

- Group 2 exposures of \$100, consisting of:
 - o Group 2a exposures of \$20 with RWA of \$200 (ie average RW of 1000%)
 - o Group 2b exposures of \$80 with RWA of \$1000 (ie average RW of 1250%)
- Total Group 2 RWA ignoring application of the 1% limit is \$1200
- All exposures above measured using the SCO60.119 (ie the Group 2b approach, except derivatives that use the delta equivalent methodology)
- Tier 1 capital of \$8,500 (ie the 1% Group 2 limit = \$85)

Applying the formula set out in SCO60.118 to this bank:

- A = \$1200 (ie total RWA ignoring the application of the cap)
- B = \$1250 = (\$20 * 1250%) + \$1000 (ie total RWA if all of Group 2a were treated as Group 2b)
- Total Group 2 RWA after the cap is \$1209, calculated as: $1200 + (1250 - 1200) * [(100 - 85) / (170 - 85)]$

Formula Structure and Implications

RWA Calculation Framework:

62. The formula provided for calculating RWA in the event of a breach of the 1% Group 2 exposure limit intricately balances the need for regulatory control with the realities of varying risk profiles within Group 2 cryptoassets. By differentiating between Group 2a and Group 2b exposures and then recalculating RWA as if all exposures were of the higher-risk Group 2b category, the formula intensifies the capital buffer requirements proportionate to the breach of the threshold. This approach underscores the regulatory emphasis on conservatism and the need for additional capital to cover the potential risk associated with these assets.

Operational Complexity:

63. Implementing this calculation requires banks to maintain accurate, up-to-date records of their cryptoasset exposures and to regularly assess these exposures against the 1% Tier 1 capital threshold. The formula introduces a layer of operational complexity, particularly in dynamically managing and adjusting cryptoasset portfolios to mitigate the risk of breaching the exposure limit and triggering the recalculated, and likely higher, RWA requirement.

Technical and Compliance Considerations

Adjustment Mechanism:

64. The formula's mechanism for adjusting RWA based on the extent of the breach (i.e., how much the actual exposure exceeds the 1% limit) provides a graduated response to varying degrees of limit breaches. This aspect of the formula allows for a more nuanced regulatory response than a binary penalty system, offering banks a clearer understanding of the incremental capital requirements associated with different levels of Group 2 exposure.

Compliance Burden:

65. Compliance with this RWA calculation requirement poses significant burdens on banks, not only in terms of the operational processes needed to continually assess exposures but also in the analytical capabilities required to project potential breaches and their capital implications. Banks must develop robust internal controls and risk management strategies to monitor and manage their Group 2 cryptoasset exposures effectively.

Market and Regulatory Implications

Incentive Structure:

66. The structured increase in capital requirements for breaches of the Group 2 exposure limit acts as a deterrent against excessive exposure to high-risk cryptoassets. It incentivizes banks to develop stringent risk assessment and management practices for their cryptoasset portfolios.

67. However, it may also disincentivize banks from engaging with the cryptoasset market, potentially limiting the market's growth and the availability of institutional-quality services within the crypto space.

Evolution of Risk Management Practices:

68. This approach to managing RWA for cryptoasset exposures may drive the evolution of risk management practices within banks. It necessitates a deeper understanding of the risk profiles of different cryptoassets and the development of sophisticated models to predict exposure levels, market movements, and the potential impact on capital requirements.

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