BERMUDA MONETARY AUTHORITY

DIGITAL ASSET BUSINESS
SINGLE CURRENCY PEGGED STABLECOINS (SCPS)
GUIDANCE

MAY 2024

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I. INTRODUCTION

1. The purpose of this Digital Asset Business Single Currency Pegged Stablecoins Guidance (Guidance) is to provide clarity for the digital asset industry on the standards the Authority expects when considering whether persons licensed under the Digital Asset Business Act 2018 (DABA or Act) and carrying on such digital asset business as Single Currency Pegged Stablecoins Issuers (SCPSIs) are conducting their business in a prudent manner.

2. Single Currency Pegged Stablecoins (SCPS) are considered for the purposes of this Guidance as a category of digital assets that aim to maintain a stable value relative to a specified asset or a pool or basket of assets in a single fiat currency, providing stability when compared to unbacked digital assets.

3. The Bermuda Monetary Authority (Authority or BMA) is of the view that there is potential for SCPS to become a widespread form of payment and foster innovation across the financial services sector. This Guidance is therefore being issued in keeping with the Authority's commitment to protect financial services customers while supporting responsible innovation locally and in the global markets.

4. The DABA and its related regulatory framework is a principles-based regime. As such, this Guidance intends to provide information and clarification as it relates to the Authority's expectation of how a digital asset business that performs as an SCPSI should meet the requirements under DABA.

5. Notwithstanding this, it is incumbent on Digital Asset Businesses (DAB) to regularly assess risks arising from their business model and implement the relevant standards commensurate with the nature, scale, complexity and overall risk profile of their business.

6. This Guidance should be read in conjunction with other documents constituting the regulatory framework, including the relevant Rules the DAB Statement of Principles and Codes.

II. PROPORTIONALITY PRINCIPLE

7. The Authority appreciates that DABs have varying risk profiles arising from the nature, scale, complexity, and inherent risk profile of the business. Those DABs with higher risk profiles would require more comprehensive governance and risk management frameworks to conduct business in a sound and prudent manner.

8. Accordingly, the Authority will assess the DAB's compliance with the Guidance in a proportionate manner relative to its inherent risk (i.e., nature, scale, complexity and risk profile). These elements will be considered collectively rather than individually (e.g., a DAB could be relatively small in scale but carry out extremely complex business and, therefore, would still be required to maintain a sophisticated risk management

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framework). In defining these elements, the following include:

a. **Nature**: The relationship between clients and the DAB or characteristics of the service provided;
b. **Scale**: The size aspects such as the volume of the business conducted or the size of the balance sheet in conjunction with materiality considerations (e.g., an assessment of the impact of a DAB's failure);
c. **Complexity**: Items such as organisational structures and product design; and
d. **Risk profile**: The number and correlations of risks as well as idiosyncratic and concentration risk.

9. In assessing the existence of sound and prudent business conduct, the Authority will have regard for both its prudential objectives and the appropriateness of each Code provision for the DAB, taking into account the DAB's nature, scale, complexity and risk profile.

III. SCOPE

10. This Guidance focuses on SCPS. While the Authority recognises the existence of a variety of other forms of stablecoins, due to the specific nature of their business model, risks and structures, the Authority will assess these on a case-by-case basis.

11. The BMA recognises that the use cases and business models of SCPS may evolve. Hence, the Authority will continue to review the requirements imposed on them and preserve powers to impose additional requirements to safeguard financial system stability and mitigate consumer harm where relevant.

IV. GOVERNANCE AND RISK MANAGEMENT

12. The Authority expects SCPSIs to establish governance arrangements that demonstrate compliance with DABA requirements. It also expects the board of directors and senior executives of SCPSIs to fulfil responsibilities such as the following:

a) Board of directors
   i. Approve and review, at least annually, risk management strategies, policies, processes and systems;
   ii. Establish an appropriate risk tolerance that is adequately documented, communicated to all relevant business lines and reviewed at least annually; and
   iii. Define a business plan, identify funding sources and regularly review funding strategies at least annually.

b) Senior executives
   i. Continuously review and regularly report to the board on compliance with regulatory requirements; and

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ii. Regularly report to the board on compliance with internal systems of controls and regulatory requirements.

13. The risk management framework should comprise policies and procedures that include, at a minimum, the following elements:

a) Risk identification;
b) Risk assessment and measurement techniques, including the rationale for implementation of specific limits;
c) Process and controls for risk management; and
d) Arrangements to restore adequate levels of liquidity and capital after financial stress.

14. The risk management framework should include policies and procedures to identify, manage, monitor and report risks. The following should also be in place:

a) A defined risk appetite that defines thresholds and actions based on the risks that the DAB is facing (e.g., depegging, elevated redemptions, risk profile of backing assets and adverse public press);
b) Continuous monitoring and management of risks against risk appetite;
c) Appropriate reporting to support the effective oversight, review and challenge of compliance requirements; and
d) Policies and procedures that require the periodic review and approval of the above arrangements to ensure that they remain appropriate to facilitate effective risk oversight and management.

V. MARKET MAKING AND DUE DILIGENCE

15. Market making arrangements[1] play a crucial role in providing liquidity and stability to SCPS by actively participating in continuous buy and sell orders. Market makers improve market liquidity, which allows for trades to be executed with reduced price slippage.

16. The Authority expects SCPSIs to design, implement and document their due diligence processes for assessing market makers to ensure that any risk posed by the SCPSI is identified, managed, monitored and, where possible, mitigated.

17. The Authority expects systems and processes to be in place that enable the DAB to oversee, monitor and report risks in a timely manner and allow senior executives to take prompt actions and ensure appropriate escalations (if applicable).

[1] In the context of this Guidance, market making arrangements are intended to include primary liquidity providers that are active in the primary market.

VI. BACKING ASSETS

18. SCPSIs are expected to hold sufficient backing assets in quantity and quality to support the stability of the designated peg in value of their SCPSs in issuance. The Authority considers backing assets to be of sufficient quantity when their market value is equal to (or higher) than the value of SCPSs in issuance. The Authority considers backing assets to be of sufficient quality when backing assets can be forthwith bought (or sold) in the market without significantly affecting their prices and when they carry limited credit risk, counterparty risk and market risk.

19. For the purposes of this Guidance, it is generally understood that short-term marketable securities representing claims on, or guaranteed by, sovereigns and central banks with high credit quality carry little liquidity and counterparty credit risk relative to other asset classes and typically have low price volatility due to the short maturity. In addition, government bond markets usually have deep and liquid secondary markets that could allow sufficient liquidity to meet redemption requests in different market conditions. Compared to other asset classes, short-dated government bonds exhibit low credit risk and relatively low liquidity risk, even in times of stress. Further, short-term cash deposits in commercial banks exhibit no price volatility and, in principle, offer high liquidity. Still, we note for the purposes of this Guidance that even deposits with commercial banks exhibit counterparty credit risk that should be managed by SCPSIs through diversification among different banking partners or otherwise.

20. The Authority expects backing assets to be sufficiently liquid to meet reasonably foreseeable redemptions. A certain percentage of the backing assets should be invested in assets that can provide daily liquidity (e.g., assets that can be liquidated or withdrawn by giving a prior notice of one working day).

21. Where interest rate risk exists, as in the case of longer-term backing assets, the backing assets should over-collateralise the claims of the digital asset holders. The level of over-collateralisation should be sufficient to cover potential declines in those asset values even during stress periods and volatile markets.

22. In addition, SCPSIs should keep all assets received from their clients (in exchange for SCPSs) segregated from their own assets. Furthermore, whereas SCPSIs may invest said assets in backing assets that meet the expectations set out in this Guidance, they should not otherwise use them for their own or another client's benefit (including re-use or rehypothecation).

23. The Authority expects SCPSIs to seek the highest credit rating available for their invested backing assets. Where limitations exist or in doing so will lead to increased risks (e.g., currency risk), SCPSIs should define and document in their investment policy how they intend to mitigate any additional risk.

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24. While the Authority does not explicitly restrict or dictate where backing assets should be invested, SCPSIs that decide to deviate from short-term government bonds should explain how the increased risks are mitigated. SCPSIs are expected to have an investment policy in place, which needs to be complemented by the use of systems and controls that ensure adherence to it.

25. SCPSIs should diversify their backing assets both in terms of investment strategy and third parties (e.g., banking parties, brokers) in order to reduce firm-specific risk and any business disruption.

26. SCPS, as a category of stablecoins, still face the risk of de-pegging, meaning they could fluctuate in value compared to their underlying asset. Typically, SCPS backing assets consist of traditional financial assets, such as US Treasury bills, which are only traded during market hours on business days. In contrast, SCPS can be traded 24 hours a day, every day. This discrepancy could lead to situations where the demand for SCPS redemptions exceeds the availability of traditional assets, potentially causing delays in redemptions. SCPSIs are expected to have triggers (e.g., materiality thresholds) and processes in place to (i) monitor and intervene when such scenarios pose a risk to their clients or the sustainability of the business and (ii) report to the Authority any such adverse conditions, as appropriate.

27. SCPSIs should value the backing assets daily and ensure that the amount held is adjusted each day to an amount at least equal to the original currency amount to which the SCPS are pegged. This adjustment should be translated to either the previous day's closing spot exchange rate or the spot exchange rate at the time of the firm's reconciliation if this provides a more stable value for clients.

VII. DISCLOSURES

28. SCPSIs should produce, in accordance with industry best practices, regular attestations and/or external audits. SCPSIs should consider the following elements[2] for their disclosures:
   a) Auditor information: The attestation should include details about the independent auditor or accounting firm that conducted the examination of SCPSI's reserves. This should include the firm's name, qualifications and any other relevant information that demonstrates its capability to perform such audits;
   b) Assertion by management: A statement from the SCPSI's management asserting that the backing assets adequately support the outstanding SCPS in circulation. This assertion should affirm that the management has evaluated the reserve's adequacy as of the attestation date;
   c) Scope of the examination: A clear description of what the examination entailed, including the specific date or period the attestation covers;
   d) Nature and quantity of backing assets: Detailed information on the types and amounts of assets held in reserve. This should include but is not limited to, fiat

[2] List for indicative purposes (not exhaustive).

currencies, government bonds, or other liquid assets that back the SCPS. The valuation methods for these assets should also be disclosed;

e) Custodial arrangements: Information on where and how the backing assets are held, including details about any custodial services or institutions involved in the storage and management of these assets;

f) Findings and opinion of the auditor: The auditor's opinion on the accuracy of the management's assertion and the adequacy of the reserve backing the stablecoin. This section should highlight any discrepancies or issues found during the examination;

g) Risk disclosures: An overview of any risks associated with SCPSI's operations and reserve management that stakeholders should be aware of. This may include de-pegging risks, liquidity risks, operational risks, or any other relevant financial risks;

h) Date of the attestation report: The date when the attestation report was issued, indicating the timeliness of the information provided; and

i) Signatures and endorsements: Signatures from both the auditor and the SCPSI's management officially endorsing the contents of the attestation.

29. SCPSIs should publish a white paper on their website, which includes information such as the description of their business, rights and obligations of both the SCPSIs and the SCPS holders, risks that can affect the stability of the SCPS value and the ability of the SCPSIs to fulfil their obligations. The SCPSIs should also update such information on their website when there have been changes to the information.

30. SCPSIs are expected to provide full disclosure of their investment policy and the invested backing assets to their clients and to the Authority. The associated documentation should disclose details such as the types, issuers and target credit ratings of permissible investments.

31. SCPSIs should provide, on an ongoing basis, full disclosure to their clients and make available the following data, as applicable:

a) The amount of SCPS in circulation;

b) The total composition of the backing assets; and

c) The latest available market value of their backing assets and/or the latest available net asset value of such assets:

   i. As soon as commercially practicable after the end of each calendar month or such other times as agreed between the parties; and

   ii. As soon as commercially practicable after any relevant client's request, such data may not be aged by more than 30 days unless agreed upon by the relevant parties.

32. In addition to the above, SCPSIs should provide information that sets out an overview of the SCPSIs' activities and main risks related to their exposures, including descriptions of:

a) Business activities related to digital assets and how these business activities translate into components of SCPSIs' risk profile;

b) Risk management policies related to digital assets exposures; and
c) Current and emerging risks relating to digital assets and how those risks are managed.

33. SCPSIs that do not guarantee redemptions at par should disclose the same in a clear and unambiguous manner to their clients.

34. Similarly, any conditions that SCPSIs wish to impose for redemptions, such as fees, redemptions' processing time (both under normal circumstances and in the event of liquidity shortfalls due to elevated redemption requests) and minimum redemption amount, should also be clearly and unambiguously disclosed to their clients, both on their website as well as any other communication channel utilised by them.

VIII. STRESS TESTING

35. It is the expectation of the Authority for SCPSIs to identify, design and implement stress testing scenarios at least yearly or when a material change in business or risk profile materialises. The stress testing should be proportional to the nature, scale, complexity and overall risk profile of their business operations. In addition, the stress testing framework for SCPSIs should include three scenarios: (a) a scenario in which the stress event is caused by an internal failure (e.g., an idiosyncratic scenario), (b) a market-driven scenario in which a systematic stress event materialises and (c) a combined scenario in which both stress events occur. As part of their stress testing, SCPSIs should consider scenarios where failures to redeem are caused by credit or market risk losses on the backing assets (i.e., the realisable value of the backing assets is insufficient to cover the claims) but also in case there is a sudden demand for mass redemptions and the backing assets may need to be liquidated in a fire sale.

36. The stress test exercise should indicate any uncovered loss, liquidity shortfall or capital inadequacy, as well as the duration of the stress and recovery path. The stress framework should show the impacts of the stress events pre and post-management actions (e.g., capital raise and sale of assets).

37. SCPSIs should design different metrics and statistical analyses to evaluate and manage redemption risk. For example, they could analyse historical redemption patterns to provide insights into how investors typically behave during different market conditions (e.g., redemption frequencies, amounts and timing).

IX. BANKRUPTCY REMOTENESS

38. Bankruptcy remoteness refers to the legal and structural measures taken to reduce the risk that a particular entity will be subject to bankruptcy proceedings if its parent undertaking (or other entity of the group) faces financial distress. The goal of bankruptcy remoteness is to create an effective separation among entities, providing protection for specific assets and limiting the impact of a distressed entity on those assets.

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39. Backing assets are expected to be placed in structures that are bankruptcy remote from any group entities and/or party that issues, manages or is otherwise involved in the SCPSIs' operations. This means that other creditors of those parties as well as any creditors of the custodian, have no claims on the backing assets. It also means that the value of the backing assets should not have any significant correlation with the creditworthiness of the SCPSIs.

40. The Authority is cognisant that while the legal mechanisms and documentation put in place to achieve bankruptcy remoteness can be objective facts, the effectiveness of these measures may be a matter of interpretation and opinion. SCPSIs should, therefore, develop robust frameworks, policies and structures to reduce the risk of their bankruptcy remote structure becoming ineffective.

41. When assessing the efficacy of the bankruptcy remote structure, the Authority may also consider whether SCPSIs have obtained an independent legal opinion for all laws relevant to involved parties to affirm that the relevant courts would recognise the underlying assets that are held in a bankruptcy-remote manner as those belonging to the SPCS holders.

42. SCPSIs should define and document how the proposed legal structure is expected to operate under normal and distressed conditions.

43. Clear contractual arrangements should be established to govern the operations of SCPSIs, such as arrangements for management of backing assets, clients' funds and funding documentation.

44. SCPSIs may maintain a record of their clients and their own transactions, either on-chain or off-chain. Where records are kept on-chain, SCPSIs are expected to have robust systems and policies in place to do so.

45. SCPSIs should perform internal and external reconciliations to assure the quantity and value of issued SCPS at least on a daily basis. To conduct an internal reconciliation, SCPSIs would compare their own record of the value of backing assets they are holding for clients against their record of the quantity of SCPS in issuance and calculate whether the values match. To conduct an external reconciliation, SCPSIs would compare their internal records of backing assets and quantity of SCPS in issuance against records of all third parties with whom the SCPS backing assets are being held (e.g., a credit institution or broker) and a third-party record of the SCPS in issuance (e.g., the blockchain).

46. To effect the external reconciliation of the quantity of SCPS issued, SCPSIs should have a means of validating whether the blockchain(s) or other distributed ledger accurately reflects the expected number of digital assets in issuance. This is to enable SCPSIs to detect if the SCPS had been compromised and whether unauthorised (and so unbacked) digital assets purporting to be the SCPS had entered into circulation.

X. INTEROPERABILITY

47. The Authority recognises the commercial (scalability) aspect and the importance of making digital assets available on different blockchains to enable different blockchain networks to work together while enhancing the overall efficiency and functionality of the ecosystem. However, it is also of the opinion that blockchains have features, characteristics and, more importantly, security aspects that can be quite different among them. For this reason, SCPSIs should design and implement policies and controls to assess and monitor the blockchains on which their SCPS operate.

48. Some elements that SCPSIs should take into consideration when assessing the operationalisation of their SCPS on different blockchains include:
    a) Consensus mechanisms: Considerations should be made regarding the efficiency and consensus algorithm;
    b) Gas fees: The impact of gas fees can render a business model not viable by increasing operational costs, discouraging user participation, and introducing uncertainties;
    c) Congestion: This element poses significant challenges to the viability of business models. Increased transaction costs during network congestion can erode profit margins, making certain models economically unfeasible. Transaction delays and unpredictability hinder operational planning, affecting businesses that rely on quick and efficient transactions;
    d) Cryptographic techniques: Robust encryption, digital signatures, and cryptographic algorithms should be carefully evaluated to ensure the confidentiality and authenticity of transactions on the blockchain to prevent unauthorised access or manipulation;
    e) Decentralised identity and authentication: Consideration should be given to blockchain platforms that support decentralised identity frameworks to ensure they enable users to have control over their personal information while also ensuring secure and authenticated transactions;
    f) Cross-chain governance: Cross-chain governance mechanisms facilitate interoperability and collaboration between different blockchain networks;
    g) Compliance frameworks: Blockchain platforms that provide features for implementing and adapting to compliance requirements, such as smart contract-based compliance, are advantageous;
    h) Audits: Transparent audit reports instil confidence in users and demonstrate a commitment to maintaining a secure and reliable ecosystem; and
    i) Continuous monitoring and incident response: choosing a blockchain platform that prioritises real-time monitoring and has established protocols for incident response ensures a proactive approach to security, minimising the impact of potential breaches.

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XI. RECOVERY AND RESOLUTION PLANNING

49. SCPSIs should identify, in advance, to the extent possible, extreme circumstances and maintain an effective plan that will enable them to continue providing their critical services if these extreme circumstances were to occur. The recovery and resolution plan should be proportional to the SCPSIs' nature, scale, complexity and overall risk profile of their business operations and address circumstances that may give rise to any uncovered loss, liquidity shortfall or capital inadequacy, as well as any structural weaknesses that these circumstances reveal.

50. The recovery and resolution plan should be documented and include a contingency funding plan to address any need to replenish any depleted financial resources and liquidity arrangements so that SCPSIs remain viable as a going concern and continue to provide their critical services. The existence of the recovery and resolution plan further enhances the resilience of SCPSIs and will provide confidence that they will be able to function effectively even in extreme circumstances.

51. Where the contingency funding plan proves, in a particular circumstance, to be ineffective, SCPSIs should have a plan to cease operations in an orderly manner.

52. The purpose of recovery and resolution planning should be to:
    a) Identify, monitor and mitigate potential harms;
    b) Consistently define business model planning and forecasting; and
    c) Assess the adequacy of financial resources.

53. SCPSIs should approve, review and test their recovery and resolution plan at least annually as well as upon the occurrence of a material change to their business.

XII. OWN FUNDS: LIQUIDITY REQUIREMENTS

54. Best practices indicate that SCPSIs should hold a sufficient amount of liquidity to wind down or exit the market in an orderly manner. The minimum liquidity requirement applicable to SCPSIs should be based on a proportion of the expected SCPS in circulation. The Authority retains discretion on whether additional liquidity might need to be held by SCPSIs based on any observed weaknesses in their infrastructure upon which the SCPS in circulation is based.

55. When assessing the liquidity requirements for SCPSIs, the Authority deems the following to be core liquid assets:
    a) Coins and banknotes;
    b) Short-term deposits at an appropriately creditworthy bank;
    c) Assets representing claims on or guaranteed by sovereigns and central banks with high credit quality; and
    d) Units or shares in a short-term regulated money market fund.

XIII. OWN FUNDS: NET ASSETS REQUIREMENTS

56. SCPSIs are expected to determine their appropriate net assets level, which should be aligned with their risk appetite (as approved by their board) and the impacts of winding down or exiting the market.

57. Notwithstanding the foregoing paragraph, the Authority may determine that SCPSIs will be required to hold a higher level of net assets based on the nature, scale, complexity and overall risk profile of their operations.

58. The level of net assets required may increase with the scale of business undertaken to address the potential for harm arising from an SCPSIs' ongoing operations.

59. When calculating the minimum level of net assets to be held, leading practices indicate that assets that are not expected to easily be converted into cash should be deducted. These can be, but are not limited to:
    a) Intangible assets: Such as goodwill. This is because intangible assets may not provide the same level of loss-absorption capacity as tangible assets; and
    b) Investments in financial institutions: Certain investments in the capital instruments of other financial institutions may be subject to deduction to avoid double-counting of capital.

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