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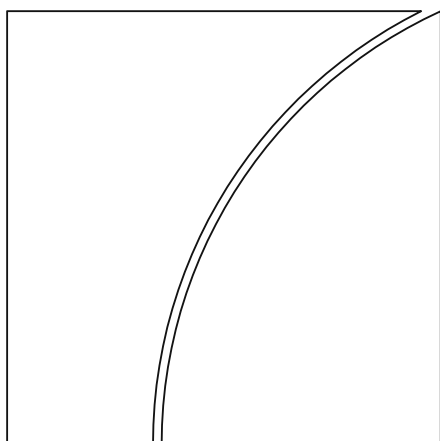
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Application of the Principles for Financial Market
Infrastructures to stablecoin arrangements

金融市场基础设施原则在稳定币安排中的应
用



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《金融市场基础设施原则》在稳定币安排中的应用

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Executive summary 执行摘要

With the emergence of stablecoins, and in light of their potential impact on the financial system, the G7, the G20 and the Financial Stability Board (FSB) called upon the standard-setting bodies to revise standards and principles or provide further guidance supplementing existing standards and principles, as needed. These standard-setting bodies include the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO).

随着稳定币的出现，考虑到其对金融体系的潜在影响，七国集团、二十国集团和金融稳定委员会（FSB）呼吁标准制定机构根据需要修订标准和原则，或提供进一步指导，补充现有标准和原则。这些标准制定机构包括支付与市场基础设施委员会（CPMI）和国际证券委员会组织（IOSCO）。

Against this background, this report provides guidance on the application of the Principles for financial market infrastructures (PFMI) to stablecoin arrangements (SAs) that are considered systemically important financial market infrastructures (FMIs), including the entities integral to such arrangements. This report is not intended to create additional standards for SAs but rather to provide more clarity to systemically important SAs and relevant authorities as those SAs seek to observe the PFMI. Although this report provides guidance on only a subset of principles, a systemically important SA primarily used for making payments would be expected to observe all of the relevant principles including those principles for which no further guidance is provided in this report. This report also does not cover issues specific to stablecoins denominated in or pegged to a basket of fiat currencies (multicurrency SAs), as they will be covered in future work to consider whether the guidance in this report is sufficient to provide clarity to multicurrency SAs when seeking to observe the PFMI.

在此背景下，本报告就金融市场基础设施原则（PFMI）应用于被视为具有系统重要性的金融市场基础设施（FMI）的稳定币安排（SA），包括此类安排中不可或缺的实体的应用提供指导。本报告的目的不是为稳定币安排制定额外的标准，而是在具有系统重要性的稳定币安排和相关机构寻求遵守 PFMI 时，为其提供更清晰的说明。尽管本报告仅对部分原则提供了指导，但主要用于支付的具有系统重要性的 SA 应遵守所有相关原则，包括本报告未提供进一步指导的原则。本报告也不涉及以一揽子法定货币计价或与一揽子法定货币挂钩的稳定币（多币种 SA）的具体问题，因为这些问题将在未来的工作中涉及，以确定本报告中的指导是否足以以为多币种 SA 在寻求遵守 PFMI 时提供清晰度。

Stablecoins' usability as a means of payment relies on the core functions performed by SAs. In particular, the SA "transfer function" enables the transfer of coins between users and typically entails the operation of a system, a set of rules for the transfer of coins between or among participants, and a mechanism for validating transactions. The transfer function of an SA is comparable to the transfer function performed by other types of FMI. As a result, an SA that performs this transfer function is considered an FMI for the purpose of applying the PFMI and, if determined by relevant authorities to be systemically important, the SA as a whole would be expected to observe all relevant principles in the PFMI. This report provides considerations to assist relevant authorities in determining whether an SA is systemically important.

稳定币作为支付手段的可用性取决于 SA 的核心功能。特别是，SA 的“转账功能”可以在用户之间转账，通常需要一个系统的运行、一套在参与者之间转账的规则以及一个交易验证机制。SA 的转账功能与其他类型的 FMI 的转账功能类似。因此，就适用 PFMI 的目的而言，执行此转移功能的 SA 被视为 FMI，如果有关当局确定 SA 具有系统重要性，则预期 SA 作为一个整体将遵守 PFMI 中的所有相关原则。本报告提供了一些考虑因素，以协助有关当局确定一个监管机构是否具有系统重要性。

Notwithstanding the fact that the transfer function of SAs is considered an FMI function for the purpose of applying the PFMI, SAs may present some notable and novel features as compared with existing FMIs. These notable features relate to: (i) the potential use of settlement assets that are neither central bank money nor commercial bank money and carry additional financial risk; (ii) the interdependencies between multiple SA functions; (iii) the degree of decentralisation of operations and/or governance; and (iv) a potentially large-scale deployment of emerging technologies such as distributed ledger technology (DLT).

尽管就应用 PFMI 而言，SA 的转移功能被认为与 FMI 功能类似，但与现有的 FMI 相比，SA 可能具有一些

显著和新颖的特征。这些显著特点涉及(i)可能使用的结算资产既不是中央银行的货币，也不是商业银行的货币，并带有额外的金融风险；(ii)多个 SA 功能之间的相互依存关系；(iii)业务和/或治理的分散程度；以及(iv)可能大规模部署分布式账本技术（DLT）等新兴技术。

The CPMI and IOSCO believe that guidance on the application of the PFMI with respect to these features of SAs is useful for SAs and relevant authorities in applying the PFMI to systemically important SAs. The guidance provided in this report is summarised in Table 1 below. This guidance focuses on a subset of the PFMI for which the CPMI and IOSCO consider that guidance is warranted in light of notable features of SAs as compared to existing FMIs. This guidance should be read in conjunction with the relevant principles, key considerations and explanatory notes of the PFMI as well as further considerations provided in Section 3.

CPMI 和 IOSCO 认为，针对 SA 这些特征的 PFMI 应用指南有助于 SA 和相关机构将 PFMI 应用于具有系统重要性的 SA。本报告中提供的指南在下文表 1 中进行了总结。本指南重点关注 PFMI 中的一个子集，CPMI 和 IOSCO 根据 SA 与现有 FMI 相比的显著特点，认为有必要对该子集进行指导。本指南应与 PFMI 的相关原则、主要考虑因素和解释性说明以及第 3 部分提供的进一步考虑因素一并阅读。

Guidance on the application of the PFMI to stablecoin arrangements (SAs)

Table1
表 1

关于将 PFMI 应用于稳定币安排 (SA) 的指南

| Principle and key considerations(KCs) 原则和主要考虑因素 (KC) | Guidance 指导 |
|---|--|
| Governance 管理 | A systemically important SA should have appropriate governance arrangements. When seeking to observe Principle 2, a systemically important SA should consider how: <ul style="list-style-type: none"> the SA's ownership structure and operation allow for clear and direct lines of responsibility and accountability, for instance, it is owned and operated by one or more identifiable and responsible legal entities that are ultimately controlled by natural persons; the SA's governance allows for timely human intervention, as and when needed, in order to observe Principle 2 and the other relevant principles of the PFMI on a continuous basis; and the SA's ownership structure and operation allow the SA to observe Principle 2 and the other relevant principles of the PFMI irrespective of the governance arrangements of other interdependent functions. <p>具有系统重要性的特殊监管机构应该有适当的治理安排。在寻求遵守原则 2 时，具有系统重要性的 SA 应考虑如何：</p> <ul style="list-style-type: none"> SA 的所有制结构和运作允许明确和直接的责任和问责关系，例如，它是由一个或多个可识别的、负责的法律实体拥有和运作的，而这些实体最终由自然人控制； 监管机构的管理允许在需要时及时进行人工干预，以便持续遵守原则 2 和 PFMI 的其他相关原则；以及 无论其他相互依存的职能部门的治理安排如何，监管机构的所有权结构和运作允许监管机构遵守原则 2 和 PFMI 的其他相关原则。 |
| Comprehensive risk management 全面风险管理 | A systemically important SA should regularly review the material risks that the FMI function bears from and poses to other SA functions and the entities (such as other FMIs, settlement banks, liquidity providers, validating node operators and other node operators, or service providers) which perform other SA functions or on which the SA relies for its transfer function. A systemically important SA should develop appropriate risk-management frameworks and tools to address these risks. In particular, it should identify and implement appropriate mitigations, taking an integrated and comprehensive view of its risks. <p>具有系统重要性的 SA 应定期审查 FMI 功能对其他 SA 功能以及执行其他 SA 功能或 SA 依赖其转移功能的实体（例如其他 FMI、结算银行、流动性提供者、验证节点运营商和其他节点运营商或服务提供者）承担和构成的重大风险。具有系统重要性的 SA 应制定适当的风险管理框架和工具来应对这些风险。特别是，它应确定并实施适当的风险降低措施，采取综合、全面的方法来应对风险。</p> |
| Settlement finality 和解终局 | A systemically important SA should provide clear and certain final settlement, at a minimum by the end of the value date, regardless of the operational settlement method used. Where necessary or preferable, such settlement should be provided on an intraday or real-time basis. When seeking to observe Principle 8, a systemically important SA should: <ul style="list-style-type: none"> clearly define the point at which a transfer of a stablecoin through the operational method used becomes irrevocable and unconditional; ensure that there is a clear legal basis that acknowledges and supports finality of a transfer; and have robust mechanism(s) for preventing any misalignment between the state of the |

ledger and legal finality and ensure that legal finality of a transfer, once it has occurred, is maintained regardless of competing state(s) of the ledger

具有系统重要性的 SA 应提供清晰和确定的最终结算，至少在价值日期结束前提供，无论使用何种操作结算方法。在必要或可取的情况下，应在当日或实时基础上提供这种结算。在遵守第 8 项原则时，具有系统重要性的证券公司应

- 明确界定通过所使用的操作方法进行的稳定币转让在何时成为不可撤销和无条件的；
- 确保有明确的法律依据，承认并支持转让的终局性；以及
- 拥有健全的机制，防止分类账状态与法律终局性之间出现任何错位，并确保转账一旦发生，无论分类账处于哪种竞争状态，其法律终局性是被维护。

Money settlement 资金结算

Principle 9-KC 2,4,5
原则 9 - KC 2、4、5

A stablecoin used by a systemically important SA for money settlements should have little or no credit or liquidity risk. In assessing the risk presented by the stablecoin, the SA should consider whether the stablecoin provides its holders with a direct legal claim on the issuer and/or claim on, title to or interest in the underlying reserve assets for timely1 convertibility at par into other liquid assets such as claims on a central bank, and a clear and robust process for fulfilling holders' claims in both normal and stressed times. When seeking to observe Principle 9, a systemically important SA should determine whether the credit and liquidity risks of the stablecoin that it uses for money settlements are minimised and strictly controlled and the stablecoin is an acceptable alternative to the use of central bank money. Relevant factors may include but are not limited to:

- The clarity and enforceability of the legal claims, titles, interests and other rights and protections accorded to holders of the stablecoin and SA participants in relation to the issuer of a stablecoin and reserve assets backing it, including their treatment (eg seniority) in the event of insolvency of the issuer, its reserve manager or a custodian of the reserve assets and/or other protections such as third party guarantees.
- The nature and sufficiency of the SA's reserve assets to support and stabilise the value of the outstanding stock of issued stablecoins, and the degree to which the SA's reserve assets could be liquidated at or close to prevailing market prices.
- The clarity, robustness and timeliness of the process for converting the stablecoin into other liquid assets such as claims on a central bank in both normal and stressed circumstances. The stablecoin should be convertible into other liquid assets, as soon as possible, at a minimum by the end of the day and ideally intraday.
- The creditworthiness, capitalisation, access to liquidity and operational reliability of the issuer of the stablecoin, provider of the settlement accounts and custodian(s) of the reserve assets. Reserve assets held or placed in custody should be protected against claims of a custodian's creditors. Any chosen custodians should have robust accounting practices, safekeeping procedures and internal controls to protect the assets, as well as a sound legal basis supporting its activities, including the segregation of assets.
- The sufficiency of the regulatory and supervisory framework that applies to the issuer, reserve manager(s) and/or custodian(s) of the reserve assets.
- The existence of risk controls that could, where needed, reduce credit and/or liquidity risks. Possible examples include collateral pools supporting committed lines of credit, third party guarantees and procedures for allocating losses arising from a default by the issuer or a decrease in value of the stablecoin

具有系统重要性的 SA 的用于货币结算的稳定币应几乎没有信用或流动性风险。在评估稳定币带来的风险时，监管机构应考虑稳定币是否为其持有者提供了对发行者的直接法律索偿权和/或对基础储备资产的索偿权、所有权或权益，以便及时¹，按面值兑换成其他流动性资产，如对中央银行的索偿权，并有明确和健全的程序来履行持有人的索偿权，无论在正常还是紧张时期。

在寻求遵守原则 9 时，具有系统重要性的 SA 应确定其用于货币结算的稳定币的信用和流动性风险是否被最小化和严格控制，以及稳定币是否是使用中央银行货币的可接受替代品。相关因素可能包括但不限于：

- 给予稳定币持有人和 SA 参与者的与稳定币发行人和支持稳定币的储备资产有关的法律索赔、所有权、利益和其他权利及保护的明确性和可执行性，包括

在发行人、其储备管理人或储备资产保管人破产和/或第三方担保等其他保护情况下的待遇（如优先权）。

- SA 储备资产的性质和是否足以支持和稳定已发行的稳定币的价值，以及 SA 储备资产可以按照或接近现行市场价格变现的程度。
- 在正常和压力情况下，稳定币转换为其他流动资产（例如对中央银行的债权）的过程应清晰、稳健且及时。稳定币应尽快转换为其他流动资产，至少应在当天结束前完成，最好在当日内完成。

-
- 稳定币发行方、结算账户提供方和储备资产托管方的信用度、资本化程度、流动性和运营可靠性。持有或托管的储备资产应受到保护，免受托管人债权人的索赔。任何选定的托管人都应具备健全的会计实务、安全保管程序和内部控制，以保护资产，并有健全的法律基础支持其活动，包括资产隔离。
 - 适用于储备资产发行人、储备管理人和/或保管人的监管和监督框架是否充分。
 - 风险控制措施的存在，可在必要时降低信用和/或流动性风险。可能的例子包括支持已承诺信用额度的抵押品池、第三方担保以及发行方违约或稳定币价值下降时损失分配的程序。

¹ As soon as possible, at a minimum by the end of the day and ideally intraday, as set out in KC5 and the third bullet point in this section

¹ 按照 KC5 和本节第三个要点的规定，尽快，至少在当天结束前，最好在当日内。

1. Introduction 导言

1.1 Background 背景介绍

1.1.1 The payments landscape is rapidly evolving. Broad-based growth in financial innovation has lowered barriers for new actors to offer payment services.¹ Among the new players are the operators of stablecoin arrangements (SAs). An SA is an arrangement that combines a range of functions to provide an instrument that purports to be used as a means of payment and/or store of value.² However, a particular SA may be used for different purposes and could evolve over time.

支付领域正在迅速发展。金融创新的广泛增长降低了新参与者提供支付服务的门槛。1 新参与者包括稳定币安排（SA）的运营商。2 不过，特定的稳定币安排可能用于不同的目的，并可能随着时间的推移而演变。

1.1.2 With the emergence of stablecoins, the international regulatory community has sought to further understand these new entrants and the potential risks they may pose to the financial system. The G7 Working Group on Stablecoins and the Financial Stability Board (FSB) conducted work on the impact of global SAs and each published recommendations for their regulation, supervision and oversight.³ As part of that work, the G7, the G20 and the FSB recognised the potential role of SAs in improving global cross-border payments and called upon the standard-setting bodies “as needed, to make any revisions to standards and principles or provide further guidance supplementing existing standards and principles in light of the FSB Report and following their review of their existing frameworks, including on cooperation, coordination and information sharing amongst authorities”.⁴ These standard-setting bodies include the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO).

随着稳定币的出现，国际监管界试图进一步了解这些新进入者及其可能对金融体系造成的潜在风险。七国集团（G7）稳定币工作组和金融稳定委员会（FSB）就全球稳定币的影响开展了工作，并分别发布了对其监管、监督和监察的建议。3 作为这项工作的一部分，七国集团、二十国集团和金融稳定委员会认识到 SAs 在改善全球跨境支付方面的潜在作用，并呼吁标准制定机构“根据金融稳定委员会的报告并在审查其现有框架后，视需要对标准和原则进行修订或提供进一步指导，以补充现有标准和原则，包括有关当局之间合作、协调和信息共享的标准和原则”。4 这些标准制定机构包括支付与市场基础设施委员会（CPMI）和国际证券委员会组织（IOSCO）。

1.1.3 Where appropriate, the CPMI and IOSCO will further examine regulatory, supervisory and oversight issues associated with SAs and, as needed and appropriate, coordinate with other standard-setting bodies to address outstanding standards gaps. This report does not cover issues specific to stablecoins denominated in or pegged to a basket of fiat currencies (multicurrency SAs), as they will be covered in future work which will consider whether the guidance in this report is sufficient to provide clarity to multicurrency SAs when seeking to observe the Principles for Financial Market Infrastructures (PFMI).⁵

CPMI 和 IOSCO 将酌情进一步审查与 SA 相关的监管、督导和监督问题，并在必要和适当的情况下，与其他标准制定机构协调，以解决尚未解决的标准差距问题。本报告不涉及以一揽子法定货币计价或与一揽子法定货币挂钩的稳定币（多币种 SA）的具体问题，因为这些问题将在未来的工作中涉及，未来的工作将考虑本报告中的指导是否足以为多币种 SA 在寻求遵守《金融市场基础设施原则》

¹ See Carstens (2020). 见 Carstens (2020)。

² See FSB (2020a). The FSB report defines stablecoins as “a crypto-asset that aims to maintain a stable value relative to a specified asset, or a pool or basket of assets”.

见 FSB (2020a)。金融稳定委员会的报告将稳定币定义为“一种加密资产，旨在保持相对于特定资产、资产池或一篮子资产的稳定价值”。

³ See G7 Working Group on Stablecoins (2019) and FSB (2020a). 见 G7 稳定币工作组 (2019) 和金融稳定委员会 (2020a)。

⁴ See FSB (2020b). The “roadmap” in the report sets out actions for 19 building blocks (BBs), including BB18: “Fostering the soundness of global stablecoin arrangements for cross-border payments.” This CPMI-IOSCO report is the CPMI-IOSCO’s deliverable under Action 1 of BB18.

见 FSB (2020b)。报告中的“路线图”列出了 19 个构件 (BB) 的行动，包括 BB18: “促进跨境支付全球稳定币安排的健全性”。这份 CPMI-IOSCO 报告是 CPMI-IOSCO 在 BB18 行动 1 下的可交付成果。

⁵ CPSS-IOSCO (2012)。CPSS-IOSCO (2012)。

(PFMI) 5时提供明确性。

1.1.4 The CPMI and IOSCO published a consultative report on 6 October 2021 and invited comments until 1 December 2021 (see Annex A for a list of the consultation questions). Twenty-six submissions of comments were received.⁶ All the comments have been carefully examined and most of them are reflected in the final report. Given the purpose of this report (See Section 1.2), comments not directly related to the purpose of the report or those raising general issues of concern related to the introduction of SAs have not been reflected in the report.⁷ Some of these issues can be further considered by the CPMI, IOSCO and/or other relevant standard-setting bodies.

CPMI和IOSCO于2021年10月6日发布了咨询报告，并邀请各方在2021年12月1日之前提出意见（咨询问题清单见附件A）。共收到26份意见书。6 所有意见都经过了仔细审查，其中大部分意见在最终报告中得到了反映。鉴于本报告的目的（见第1.2节），与本报告目的不直接相关的意见或提出与引入SA有关的一般性问题的意见未在本报告中反映。7 其中一些问题可由CPMI、IOSCO和/或其他相关标准制定机构进一步考虑。

1.2 Purpose of the report 报告的目的

1.2.1 The purpose of this report is to provide guidance on the application of the PFMI to SAs that are considered systemically important FMIs.⁸ This report is intended for use by systemically important SAs as they design, develop and operate their services and arrangements, including SAs that have the potential to become systemically important after launch; and by regulatory, supervisory and oversight authorities as they carry out their respective responsibilities for systemically important SAs. The guidance in this report does not create additional standards for SAs beyond those set out in the PFMI, but rather aims to provide increased clarity and granularity on how systemically important SAs should approach observing certain aspects of the PFMI. Topics in this report are interrelated and are intended to be considered holistically, similar to the standards set out in the PFMI.

本报告的目的是为被视为具有系统重要性的金融中介机构的SA应用PFMI提供指导。8 本报告旨在供具有系统重要性的SA在设计、开发和运营其服务和安排时使用，包括在推出后有可能成为具有系统重要性的SA；也供监管、监督和监督机构在履行各自对具有系统重要性的SA的职责时使用。本报告中的指导并没有在PFMI规定的标准之外为SA制定额外的标准，而是旨在进一步明确和细化具有系统重要性的SA应如何遵守PFMI的某些方面。本报告中的主题相互关联，应与PFMI中规定的标准类似，从整体上加以考虑。

1.3 General applicability of the PFMI to SAs PFMI对SA的一般适用性

1.3.1 SAs can be designed and organised in a variety of ways. In particular, as noted in the reports by the G7 Working Group on Stablecoins and the FSB, an SA “[t]o be useable as a means of payment and/or store of value, [...] typically provides three core functions: (i) issuance, redemption and stabilisation of the value of the coins;

⁶ The comments have been published on the websites of the BIS and IOSCO. 这些意见已在国际清算银行和国际证监会组织的网站上公布。

⁷ Some comments relate to issues regarding competition, consumer protection and AML/CFT and systemic risk of stablecoins undermining sovereign currencies. It is understood that existing national, regional and global standards addressing these issues would apply where relevant to SAs and that it is left to the relevant authorities to decide whether additional guidance on their application to SAs is needed. See also CPMI-IOSCO (2012), footnote 16.

一些评论涉及竞争、消费者保护、反洗钱/打击资助恐怖主义行为以及稳定币破坏主权货币的系统性风险等问题。据了解，现有国家、区域和全球标准将在相关情况下适用于稳定币，是否需要制定适用于稳定币的额外指导方针，将由相关机构决定。另见CPMI-IOSCO (2012)，脚注16

⁸ See section 1.3.2 infra. Note that, as set forth in the PFMI, “[i]n some cases, exchanges or other market infrastructures may own or operate entities or functions that perform centralised clearing and settlement processes that are covered by the [PFMI]. In general, however, the [PFMI] are not addressed to market infrastructures such as trading exchanges, trade execution facilities, or multilateral trade-compression systems; nonetheless, relevant authorities may decide to apply some or all of these principles to types of infrastructures not formally covered by [the PFMI]” or this report. See CPMI-IOSCO (2012), footnote 2

见下文第1.3.2节。请注意，如PFMI所述，“在某些情况下，交易所或其他市场基础设施可能拥有或运营执行[PFMI]所涵盖的集中清算和结算流程的实体或功能。然而，一般而言，[PFMI]并非针对交易所、交易执行设施或多边贸易压缩系统等市场基础设施；不过，相关机构可决定将这些原则的部分或全部适用于[PFMI]或本报告未正式涵盖的基础设施类型。见CPMI-IOSCO (2012)，脚注2。

(ii) transfer of coins [hereinafter the “transfer function”]; and (iii) interaction with coin users for storing and exchanging coins”.⁹ In some cases, all three functions are conducted by a single entity, while in others, the functions are unbundled, that is, each function is managed by a different entity or person.

稳定币的设计和方式多种多样。特别是，正如 G7 稳定币工作组和金融稳定委员会的报告所指出的，一个 SA “要想被用作支付手段和/或价值储存手段，[.....]通常要提供三个核心功能：(1) 发行、赎回和稳定币值；(2) 币的转移[以下简称 “转移功能”]；(3) 与币用户互动以储存和交换币”。⁹ 在某些情况下，所有这三项职能都由一个实体承担，而在其他情况下，这些职能是分拆的，即每项职能都由不同的实体或个人管理。

1.3.2 The PFMI define an FMI as “a multilateral system among participating institutions, including the operator of the system, used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions. FMIs typically establish a set of common rules and procedures for all participants, a technical infrastructure, and a specialised risk-management framework appropriate to the risks they incur. FMIs provide participants with centralised clearing, settlement, and recording of financial transactions among themselves or between each of them and a central party to allow for greater efficiency and reduced costs and risks.” The PFMI go on to note that “[t]here can be significant variation in design among FMIs with the same function.”¹⁰

PFMI 将 FMI 定义为 “以清算、结算或记录支付、证券、衍生工具或其他金融交易为目的的参与机构（包括系统运营商）之间的多边系统。FMI 通常为所有参与者建立一套共同的规则和程序、一个技术基础设施和一个适合其风险的专门风险管理框架。金融中介机构为参与者提供集中清算、结算和记录他们之间或他们与中央方之间的金融交易的服务，以提高效率，降低成本和风险”。 “PFMI 接着指出， “具有相同功能的 FMI 在设计上可能存在很大差异。 ”¹⁰

1.3.3 In considering the functions of FMIs against those performed by SAs, the CPMI and IOSCO have determined that the transfer function is an FMI function. Accordingly, an SA that performs a transfer function should be considered an FMI for the purpose of applying the PFMI.¹¹ For SAs that are primarily used for making payments, the principles that apply to payment systems, including those for which no further guidance is provided in this report, will apply in their entirety to SAs performing a transfer function based on a functional approach (“same business, same risks or risk profile, same rules”). To the extent to which an SA provides functions that more closely resemble those provided by other types of FMIs, the SA should consider the relevant principles and observe them accordingly. However, these scenarios are beyond the scope of this report.¹² For the purpose of the application of the guidance provided in this report, it is important to acknowledge that, regardless of the legal characterisation of the SA under a particular jurisdiction’s legal and regulatory framework, the guidance will apply to an SA that performs the transfer function and is considered systemically important by relevant authorities. The PFMI are designed to apply to systemically important FMIs. Where an SA performs a transfer function and is determined by authorities to be systemically important (see Section 2), the SA as a whole would be expected to observe all relevant principles of the PFMI. Insofar as the scope of this report is concerned, it should be noted that the guidance was designed to address systemically important SAs that perform the transfer function, meaning as discussed in section 1.3.1 above, and that the guidance does not contemplate non-SA FMIs that use or accept stablecoins. Further, using or accepting stablecoins as a means of payment (eg in the course of providing financial services) in and of itself is not equivalent to performing the transfer function. To the extent that stablecoins are used as investment or for speculative purposes in trading, lending and borrowing activities, or in other financial services activities,¹³ other international standards or principles may also be relevant.

在考虑 FMIs 的功能与 SA 执行的功能的对比时，CPMI 和 IOSCO 认定转移功能属于 FMI 功能。因此，就

⁹ See the FSB (2020a), p 10. See also Annex B below. 见 FSB (2020a), 第 10 页。另见下文附件 B。

¹⁰ CPSS-IOSCO (2012), paragraph 1.9 CPSS-IOSCO (2012), 第 1.9 段

¹¹ Depending on the organisational structure or governance of the SA, the FMI board (or equivalent) could be the governance body for the transfer function or the SA as a whole.

根据 SA 的组织结构或治理情况，FMI 董事会（或同等机构）可以是转移职能或整个 SA 的治理机构。

¹² Generally speaking, characterisation of an FMI would depend on the legal and regulatory framework of relevant jurisdictions.

一般而言，金融中介机构的定性取决于相关司法管辖区的法律和监管框架。

¹³ See IOSCO (2022). 见 IOSCO (2022)

PFMI的适用而言，履行转移功能的SA应被视为FMI。¹¹ 对于主要用于支付业务的SA，适用于支付系统的原则（包括本报告未提供进一步指导的原则）将完全适用于基于功能方法（“相同业务、相同风险或风险状况、相同规则”）执行转移功能的SA。如果SA提供的功能与其他类型的FMI提供的功能更为相似，则SA应考虑相关原则并相应遵守。然而，这些情况超出了本报告的范围。¹² 为了应用本报告提供的指导，重要的是要认识到，无论特定司法管辖区的法律和监管框架对SA的法律定性如何，该指导将适用于履行转移职能并被相关机构视为具有系统重要性的SA。PFMI旨在适用于具有系统重要性的金融中介。如果一家SA履行转移职能，并被当局认定为具有系统重要性（见第2节），则该SA整体上应遵守PFMI的所有相关原则。就本报告的范围而言，应当指出的是，该指南旨在解决具有系统重要性的、履行转移职能的SA，即上文第1.3.1节中讨论的SA，该指南并未考虑使用或接受稳定币的没有稳定币安排的FMIs。此外，使用或接受稳定币作为支付手段（例如在提供金融服务过程中）本身并不等同于履行转移功能。如果稳定币被用于投资或投机目的，用于交易、借贷或其他金融服务活动，¹³则可能还涉及其他国际标准或原则。

1.4 Notable SA features SA的显著特征

1.4.1 Although SAs are considered FMIs based on the functional approach, they may present some novel features as compared with other FMIs. The CPMI and IOSCO believe that guidance with respect to these features is useful for SAs and relevant authorities in applying the PFMI to systemically important SAs.

尽管根据功能性方法SA被视为FMI，但与其他FMI相比，它们可能具有一些新的特征。CPMI和IOSCO认为，有关这些特征的指导对于SA和相关机构将PFMI应用于具有系统重要性的SA非常有用。

1.4.2 The CPMI and IOSCO consider that the unique feature of SAs as compared to existing FMIs is the **use of stablecoins – settlement assets that may be neither central bank money nor commercial bank money**.¹⁴ The safety of an SA's money settlements¹⁵ will depend on the credit and liquidity risk stemming from the entity performing the issuance and redemption of the stablecoin, on the assets used to support the value of the stablecoin and the relevant custody and investment arrangements. It also depends on the ability of the users to have access to these assets. Money settlements play a crucial role in an FMI's operation. The novelty and uniqueness of an SA's approach to money settlements call for the more granular guidance in this report (see Section 3.5, Money settlements).

CPMI和IOSCO认为，与现有的FMI相比，SA的独特之处在于**使用稳定币--既可以是中央银行货币也可以是商业银行货币的结算资产**。¹⁴ SA货币结算的安全性¹⁵将取决于信用和流动性风险。这取决于执行稳定币发行和赎回的实体、用于支持稳定币价值的资产以及相关的保管和投资安排。它还取决于用户获取这些资产的能力。货币结算在金融中介机构的运作中起着至关重要的作用。由于SA货币结算方式的新颖性和独特性，需要本报告提供更详细的指导（见第3.5节，货币结算）。

1.4.3 SAs are further characterised by some features that appear more pronounced in SAs than in existing FMIs, such as **multiple interdependent functions**. As mentioned above, an SA typically performs other functions beyond a transfer function. To a varying degree, these functions may entail other activities that assist or affect the FMI function, or may be commingled with the FMI function, such that their performance affects the ability of the SA to observe the PFMI as a whole. In fact, the perimeter of the FMI function and thus the boundary between this function and other SA functions and activities may vary across SA models. For example, in some SA models, all the SA functions may be conducted and/or governed by a single entity, while in other models each SA function may be performed by separate entities, including non-FMI and/or unregulated entities. Existing FMIs also feature “institutional interdependencies” and the PFMI provide standards for FMIs to comprehensively manage risks that arise in or are borne by the FMI, including risks resulting from interdependencies. This report builds on this standard by providing guidance in the context of SAs' multiple

¹⁴ CPSS-IOSCO (2012), paragraph 3.9.1, states: “Commercial bank money is a liability of a commercial bank, in the form of deposits held at the commercial bank, which can be used for settlement purposes”. Whether a stablecoin issued by a commercial bank is considered a form of commercial bank money for the purpose of applying the PFMI may depend on its design and relevant legal and regulatory frameworks.

CPSS-IOSCO (2012)，第3.9.1段指出：“商业银行货币是商业银行的一种负债，其形式为商业银行的存款，可用于结算目的”。就适用PFMI而言，商业银行发行的稳定币是否被视为商业银行货币的一种形式，可能取决于其设计以及相关的法律和监管框架。

¹⁵ The use of the term “money settlements” here should not be understood as a statement that stablecoins are a form of monies. 这里使用的“货币结算”一词不应理解为稳定币是一种货币形式。

interdependent functions (see Section 3.3, Framework for the comprehensive management of risks).¹⁶

SAs还有一些特征，这些特征在SAs中比在现有FMI中更为明显，例如**多种相互依赖的功能**。如上所述，SA通常执行传输功能以外的其他功能。这些功能在不同程度上可能涉及协助或影响FMI功能的其他活动，也可能与FMI功能混合，从而影响SA整体遵守PFMI的能力。事实上，FMI职能的范围以及该职能与其他SA职能和活动之间的界限可能因SA模型而异。例如，在某些SA模型中，所有SA职能可能由一个单一实体执行和/或管理，而在其他模型中，每个SA职能可能由单独的实体执行，包括非FMI和/或不受监管的实体。现有的金融中介还具有“机构相互依存性”，PFMI为金融中介提供了全面管理其自身风险或由其承担的风险的标准，包括相互依存性带来的风险。本报告以该标准为基础，就SA的多种相互依存功能提供了指导（见第3.3节，全面风险管理框架）。¹⁶

1.4.4 Finally, SAs may have new features that may also be adopted by other FMIs. These features include the **use of distributed and/or automated technology protocols as well as decentralisation of operations and/or governance** facilitated by the use of these technology protocols. While the PFMI do not prescribe the use of a certain technology, new and innovative technologies may have an impact on how an FMI observes certain principles. For instance, the use of distributed ledger technology (DLT) in the SA's transfer function may create a misalignment between legal (settlement) finality and technical settlement (see Section 3.4, Settlement finality). It may also facilitate different degrees of decentralisation, of both FMI operations and organisational structure, in contrast to the typically centralised nature of FMI functions in existing FMIs. This report provides some guidance on these features to the extent that SAs may be the first to deploy these new technologies and models at scale (See Section 3.2, Governance).¹⁷

最后，SAs可能具有其他FMIs也可能采用的新特征。这些特点包括**使用分布式和/或自动化技术协议，以及通过使用这些技术协议促进业务和/或治理的分散化**。虽然PFMI没有规定必须使用某种技术，但新技术和创新技术可能会影响金融中介机构遵守某些原则的方式。例如，在SA的转账功能中使用分布式账本技术 (DLT) 可能会造成法律（结算）终局性与技术结算之间的错位（见第3.4节，结算终局性）。它还可能促进金融中介机构业务和组织结构不同程度的分散化，与现有金融中介机构中金融中介机构职能的典型集中性质形成鲜明对比。本报告就这些特点提供了一些指导，以帮助SAs率先大规模部署这些新技术和新模式（见第3.2节“治理”）。¹⁷

1.5 Organisation of the report 报告的组织

1.5.1 The remainder of the report sets out considerations for determining the systemic importance of SAs (Section 2) and provides guidance on how certain aspects of the PFMI could be observed by SAs (Section 3).

本报告的其余部分阐述了确定SAs系统重要性的考虑因素（第2部分），并就SAs如何遵守PFMI的某些方面提供了指导（第3部分）。

2. Considerations for determining the systemic importance of an SA 决定SA系统重要性的因素

2.1.1 The PFMI apply to systemically important FMIs. Certain types of FMIs – central counterparties, central securities depositories, securities settlement systems and trade repositories – are presumed to be systemically important at least in the jurisdiction in which they are located, whereas there is no such presumption for payment systems and they are evaluated individually. The PFMI observe that “where definitions exist, statutory definitions of systemic importance may vary somewhat across jurisdictions”.¹⁸

¹⁶ The guidance in this report regarding multiple interdependent functions is not intended to apply to FMIs which employ similar notable features but are not SAs, as those FMIs are outside the scope of this report.

本报告中关于多重相互依存功能的指导意见无意适用于采用类似显著特征但不是SA的FMI，因为这些FMI不在本报告的范围之内。

¹⁷ The guidance in this report regarding the use of distributed and/or automated technology protocols as well as decentralisation of operations and/or governance is not intended to apply to other FMIs which employ similar notable features but are not SAs.

本报告中关于使用分布式和/或自动化技术协议以及分散运营和/或治理的指导，并不适用于采用类似显著特征但不属于SA的其他FMI。

¹⁸ CPSS-IOSCO (2012), paragraph 1.20. CPSS-IOSCO (2012), 第1.20段。

PFMI 适用于具有系统重要性的金融中介机构。某些类型的金融中介机构--中央对手方、中央证券存管机构、证券结算系统和交易存储库--被推定为至少在其所在辖区具有系统重要性，而支付系统则没有这种推定，而是对其进行单独评估。PFMI 指出，"在有定义的情况下，系统重要性的法定定义在不同辖区可能有些差异"。¹⁸

2.1.2 The PFMI describe factors that authorities can take into account when determining whether an FMI is systemically important in their jurisdiction. For example, in general, a payment system is systemically important if it has the potential to trigger or transmit systemic disruptions.¹⁹ Among other things, this includes: (i) systems that are the sole payment system in a country or the principal system in terms of the aggregate value of payments; (ii) systems that mainly handle time-critical, high-value payments; and (iii) systems that settle payments used to effect settlement in other systemically important FMIs.²⁰ These systems may be domestic, cross-border or multicurrency.

PFMI描述了当局在确定某一FMI在其管辖范围内是否具有系统重要性时可以考虑的因素。例如，一般来说，如果一个支付系统有可能引发或传递系统性破坏，则该系统具有系统重要性。¹⁹ 除其他外，这包括：(1) 在一个国家中作为唯一支付系统或就支付总额而言作为主要系统的系统；(2) 主要处理时间紧迫、价值高的支付的系统；以及 (3) 用于在其他具有系统重要性的FMI进行结算支付的系统。²⁰ 这些系统可能是国内、跨境或多币种的。

2.1.3 The CPMI and IOSCO have identified four overarching considerations, along with more granular underlying factors to provide additional context that an authority may take into account when assessing the systemic importance of an SA within its jurisdiction for the purpose of applying the PFMI. These considerations may be in addition to any other aspects that an authority deems relevant to its analysis.²¹ The organisation, design and function of SAs continue to evolve, and SAs may be designed and used differently across jurisdictions. Accordingly, these considerations provide flexibility to authorities in their assessment of the systemic importance of an SA. The set of considerations are intended to be assessed holistically, rather than taking each point as an independent reflection of systemic importance (each point alone would not necessarily be sufficient to determine systemic importance). The considerations include:

CPMI 和 IOSCO 已经确定了四项总体考虑因素，以及更细化的基本因素，以提供更多的背景，供监管机构在其管辖范围内评估 SA 的系统重要性时参考，以便应用 PFMI。²¹ SA 的组织、设计和功能仍在不断发展，不同司法管辖区对 SA 的设计和使用也可能不同。因此，这些考虑因素为监管机构评估 SA 的系统重要性提供了灵活性。这套考虑因素旨在进行整体评估，而不是将每一点都作为系统重要性的独立反映（仅靠每一点不一定足以确定系统重要性）。考虑因素包括：

¹⁹ CPSS-IOSCO (2012), paragraph 1.20. CPSS-IOSCO (2012), 第 1.20 段。

²⁰ The PFMI state that these factors that authorities can take into account in determining systemic importance mirror those outlined in CPSS (2001). See CPSS-IOSCO (2012), paragraph 1.20 and footnote 19. In addition to the three factors described in CPSS-IOSCO (2012), paragraph 2.1.2 above, CPSS (2001) provides factors to distinguish a systemically important payment system (SIPS) from those which are not. See CPSS (2001), paragraphs 6.6–6.11. The distinguishing feature is that a SIPS is capable of triggering or transmitting disruptions across the financial system domestically or internationally. The main factor in assessing the potential for such triggering or transmitting is the value of payments processed by the system in relation to resources of the system's participants and in the context of the financial system more generally. Another relevant factor is the nature of payments handled by the system.

PFMI 指出，当局在确定系统重要性时可考虑的这些因素与 CPSS (2001) 中概述的因素相同。见 CPSS-IOSCO (2012)，第 1.20 段和脚注 19。除了 CPSS-IOSCO (2012) 第 2.1.2 段所述的三个因素外，CPSS (2001) 还提供了区分系统重要性支付系统（SIPS）与非系统重要性支付系统（SIPS）的因素。见 CPSS (2001)，第 6.6-6.11 段。系统重要性支付系统的显著特点是能够在国内或国际上引发或传递整个金融系统的混乱。评估这种触发或传递的可能性的主要因素是该系统处理的付款相对于该系统参与者资源的价值，以及在更广泛的金融系统背景下的价值。另一个相关因素是该系统处理的付款的性质。

²¹ These considerations are broadly consistent with the potential elements developed by the FSB in considering whether a stablecoin qualifies as a global stablecoin, which are, in turn, built upon the criteria set forth in the PFMI and by the Basel Committee on Banking Supervision with respect to considering whether an entity is a global systemically important bank. A global stablecoin is defined by the FSB as: "a widely adopted stablecoin with a potential reach and use across multiple jurisdictions". A stablecoin arrangement is defined by the FSB as "[a]n arrangement that combines a range of functions (and the related specific activities) to provide an instrument that purports to be used as a means of payment and/or store of value." See FSB (2020a).

这些考虑因素与金融稳定委员会在考虑稳定币是否有资格成为全球稳定币时制定的潜在要素大体一致，而这些要素又建立在 PFMI 和巴塞尔银行监管委员会在考虑一个实体是否是全球系统重要性银行时制定的标准之上。金融稳定委员会将全球稳定币定义为"被广泛采用的稳定币，其使用范围可能跨越多个司法管辖区"。金融稳定委员会对稳定币安排的定义是："将一系列功能（以及相关的具体活动）结合在一起，以提供一种声称可用作支付手段和/或价值储存的工具的安排"。见 FSB (2020a)。

I. Size of the SA, ie whether the stablecoin is used as a principal payment or settlement mechanism for the jurisdiction or the market it serves. This could include consideration of the:

SA 的规模，即稳定币是否被用作该辖区或服务市场的主要支付或结算机制。这可能包括考虑：

a. number of stablecoin users; and

稳定币用户数量；以及

b. number and value of transactions and value of stablecoins in circulation.

交易数量和价值以及流通中的稳定币价值。

II. Nature and risk profile of the SA's activity. This could include consideration of the:

SA 活动的性质和风险概况。这可能包括对以下方面的考虑：

a. type of stablecoin users, eg retail customers, financial entities; and

稳定币用户的类型，如零售客户、金融实体；以及

b. type or nature of transactions, based on indicators such as: (i) time criticality of the transactions given possible disruption; (ii) wholesale or retail nature of transactions; (iii) use or purpose of transactions, such as whether the SA is used in connection with cross-border payments, financial transactions/investments, monetary operations, or foreign exchange transactions; and (iv) denomination of the stablecoin and/or its reserve assets.

交易的类型或性质，依据的指标包括(1) 鉴于可能发生的中断，交易的时间关键性；(2) 交易的批发或零售性质；(3) 交易的用途或目的，例如稳定币是否用于跨境支付、金融交易/投资、货币业务或外汇交易；以及 (4) 稳定币和/或其储备资产的面额。

III. Interconnectedness and interdependencies of the SA, in particular whether the SA has significant interconnectedness and interdependencies with the real economy and financial system. This could include consideration of the:

SA的相互关联性和相互依存性，尤其是SA是否与实体经济和金融体系有重大的相互关联性和相互依存性。这可能包括考虑：

a. interconnectedness with other systemically important FMIs and institutions, and the real economy and governments (eg whether the SA is used to settle transactions for governments, important financial markets or other FMIs); and

与其他具有系统重要性FMIs和机构，以及实体经济和政府之间的相互关联性（例如，SA是否被用于为政府、重要金融市场或其他FMIs进行交易结算）；以及

b. business, structural and operational complexity: the more complex the SA is, the greater the potential for interdependencies and the greater the challenge of managing them given the likely higher number of involved entities and risk propagation channels.

业务、结构和运作的复杂性：战略评估越复杂，相互依赖的可能性就越大，由于涉及的实体和风险传播渠道可能更多，管理这些相互依赖关系的挑战也就越大。

IV. Substitutability of the SA, ie whether there are available alternatives to using the SA as a means of payment or settlement for time-critical services.

SA的可替代性，即除了使用SA作为时间关键型服务的支付或结算手段外，是否还有其他可用的替代手段。

2.1.4 The considerations could be used by an authority overseeing the SA or by authorities assessing the SA's systemic importance to their respective jurisdictions. In line with Responsibility A of the PFMI, authorities should clearly define and publicly disclose the criteria used to identify FMIs that should be subject to regulation, supervision, and oversight,²² including the criteria used to determine their systemic importance. Within this

²² See key consideration 1 of Responsibility A. 见责任 A 的主要考虑因素 1。

framework relevant authorities should monitor developments related to SAs and may consider at their discretion the potential growth and future state of an SA in determining the systemic importance of an SA that is under development. Relevant authorities should explore and where appropriate develop cooperative arrangements that take into consideration, among other things, the systemic importance of the SA to their respective jurisdictions. Such cooperation could help to promote consistency in the determination of the systemic importance of SAs conducting business in multiple jurisdictions.

监督 SA 的机构或评估 SA 对各自司法管辖区的系统重要性的机构可以使用这些考虑因素。根据PFMI的责任A，当局应明确界定并公开披露用于确定应接受监管、监督和监察的FMIs的标准，²² 包括用于确定其系统重要性的标准。在此框架内，相关当局应监控与SA有关的发展，并可酌情考虑SA的潜在增长和未来状态，以确定正在发展中的SA的系统重要性。有关当局应探讨并在适当的情况下制定合作安排，其中应考虑到SA对其各自管辖范围的系统重要性。这种合作有助于促进确定在多个管辖区开展业务的SA的系统重要性方面的一致性。

3. Guidance on specific principles 具体原则指导

3.1 Background 背景介绍

3.1.1 As mentioned above, a systemically important SA should observe all relevant principles of the PFMI and refer to the principles, key considerations and explanatory notes when considering its governance, design and operating model. Section 1.4 describes how SAs present notable features as compared with other FMIs. The following guidance may be useful for SAs and relevant authorities to understand how certain principles of the PFMI would apply in the light of these features.

如上所述，具有系统重要性的SA应遵守PFMI的所有相关原则，并在考虑其治理、设计和运营模式时参考原则、主要考虑因素和解释性说明。第 1.4 节介绍了SA与其他FMI相比的显著特点。以下指南可能有助于监管机构和相关当局了解PFMI的某些原则如何适用于这些特点。

3.1.2 The guidance provided in this report should be understood in the context of the principles-based approach reflected in the PFMI, which recognises FMIs' differing organisations, functions and designs, and the different ways to achieve a particular result. The guidance provided in this report should be read in conjunction with the relevant principles, key considerations and explanatory notes in the PFMI. Although this guidance is not intended to impose additional standards on systemically important SAs or authorities beyond those set out in the PFMI, an SA may need to make changes to its rules, procedures, governance arrangements and risk management framework taking the guidance into consideration in order for its practices to be consistent with the PFMI.

本报告所提供的指引应结合 PFMI 所体现的基于原则的方法来理解，PFMI承认金融中介机构的不同组织、功能和设计，以及实现特定结果的不同方法。本报告提供的指引应结合PFMI中的相关原则、主要考虑因素和解释性说明一并阅读。尽管本指南无意对具有系统重要性的SAs或当局施加PFMI规定以外的额外标准，但SA可能需要在考虑本指南的基础上对其规则、程序、治理安排和风险管理框架进行修改，以使其做法与 PFMI 保持一致。

3.1.3 Against this background, this section describes the context and issues and provides guidance on aspects related to governance (Principle 2), framework for the comprehensive management of risks (Principle 3), settlement finality (Principle 8) and money settlements (Principle 9).

在此背景下，本节描述了背景和问题，并就与治理（原则2）、全面风险管理框架（原则3）、结算终局性（原则8）和资金结算（原则9）有关的方面提供了指导。

3.2 Governance 管理

Context 背景

3.2.1 Principle 2 of the PFMI outlines the expectation that an FMI's governance arrangements promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations and the objectives of relevant stakeholders. To this end, the principle sets forth governance standards for an FMI.²³ Specifically, the principle states that an FMI should have documented and disclosed governance arrangements that provide clear and direct lines of responsibility and accountability and clearly specify the roles and responsibilities of the FMI's board of directors (or equivalent) and its management.²⁴ The principle also states that an FMI's board²⁵ should establish a clear, documented risk-management framework. Accordingly, an FMI's governance arrangements should ensure that the FMI's overall risk management framework assigns responsibilities and accountability for risk decisions and decision-making in crises and emergencies.²⁶ The explanatory text states that the governance arrangements should provide for effective decision-making in a crisis and support any procedures and rules designed to facilitate the recovery or orderly wind-down of the FMI.²⁷

PFMI 原则 2 概述了对 FMI 的治理安排的期望，即促进 FMI 的安全和效率，支持更广泛金融体系的稳定、其他相关公共利益考虑以及相关利益攸关方的目标。为此，该原则规定了 FMI 的治理标准。²³ 具体而言，该原则规定，FMI 应制定有文件记录和披露的治理安排，提供明确和直接的责任和问责关系，并明确规定 FMI 的董事会（或同等机构）及其管理层的作用和责任。²⁴ 该原则还规定，FMI 的董事会²⁵，应建立明确、有文件记录的风险管理框架。因此，FMI 的治理安排应确保 FMI 的整体风险管理框架为危机和紧急情况下的决策和风险决策分配责任和问责。²⁶ 解释性文本指出，治理安排应为危机中的有效决策提供保障，并支持旨在促进 FMI 恢复或有序清盘的任何程序和规则。²⁷

3.2.2 The explanatory text for Principle 2 further notes that an FMI that is part of a larger organisation may need to focus particular attention on aspects of its governance arrangements including the parent's or affiliated organisation's structure to ensure such an arrangement does not have adverse effects on the FMI's observance of the PFMI. The explanatory text also notes that FMIs should consider and adequately manage any risks that the FMI's other services pose to its FMI functions.²⁸

原则 2 的解释性文本进一步指出，作为大型组织一部分的 FMI 可能需要特别关注其治理安排的各个方面，包括母公司或附属组织的结构，以确保这种安排不会对 FMI 遵守 PFMI 产生不利影响。解释性文本还指出，FMIs 应考虑并充分管理 FMI 的其他服务对其 FMI 的职能构成的任何风险。²⁸

3.2.3 Therefore, the organisation of an FMI composed of one or more legal entities, ultimately controlled by natural persons, is essential for an FMI's observance of Principle 2. In addition, the ability of an FMI to observe Principle 2 and all relevant principles of the PFMI relies on appropriate governance arrangements of relevant non-FMI counterparts such as affiliated organisations.

因此，由一个或多个最终由自然人控制的法律实体组成的 FMI，对于 FMI 遵守原则 2 至关重要。此外，FMI 遵守原则 2 和 PFMI 所有相关原则的能力有赖于相关非 FMI（如附属组织）的适当治理安排。

Issues 问题

3.2.4 The CPMI and IOSCO have identified three broad challenges that certain SA models may face when seeking to observe Principle 2.

CPMI 和 IOSCO 已经确定了某些 SA 模式在寻求遵守第 2 项原则时可能面临的三大挑战。

²³ The key considerations detail the specific expectations that an FMI should meet. Among those are requirements for: the objectives of an FMI (KC1); documentation of its governance arrangements (KC2); roles and responsibilities of its board (KC3); composition of its board (KC4); roles and responsibilities of its management (KC5); risk-management decision-making and accountability (KC6); and the balancing of interests and disclosure of major decisions (KC7).

主要考虑因素详细说明了金融中介机构应满足的具体期望。其中包括以下要求：金融中介机构的目标（KC1）；治理安排文件（KC2）；董事会的作用和责任（KC3）；董事会的组成（KC4）；管理层的作用和责任（KC5）；风险管理决策和问责制（KC6）；以及利益平衡和重大决策披露（KC7）。

²⁴ See key considerations 2, 3 and 5 of Principle 2. 见原则 2 的主要考虑因素 2、3 和 5。

²⁵ References to "board" in this report should be understood to mean the board of directors (or equivalent). 本报告中提及的"董事会"应理解为董事会（或同等机构）。

²⁶ See key consideration 6. 见主要考虑因素 6。

²⁷ CPSS-IOSCO (2012), paragraph 3.2.13. CPSS-IOSCO (2012)，第 3.2.13 段。

²⁸ CPSS-IOSCO (2012), paragraphs 3.2.5 and 3.2.6. CPSS-IOSCO (2012)，第 3.2.5 和 3.2.6 段。

3.2.5 First, an SA's governance may be partially or fully decentralised and there may be no legal entities and persons in control of the FMI function. In particular, the transfer function can be set up as a smart contract on a permissionless public ledger. These smart contracts could specify the validation mechanisms on which transfer functions rely to effect settlement. For these SA models, governance of the transfer function may be performed solely by software (while human interaction with the smart contract may be part of the SA's coding) and there may be no identifiable legal entities or persons that assume responsibility and accountability for the transfer function.

首先，SA 的管理可以是部分或完全去中心化的，也可以是没有法律实体和个人控制 FMI 功能的。特别是，转账功能可以在无权限公共分类账上设置为智能合约。这些智能合约可以指定转移功能赖以实现结算的验证机制。对于这些 SA 模式，转移功能的管理可能完全由软件执行（而人与智能合约的互动可能是 SA 编码的一部分），可能没有可识别的法律实体或个人对转移功能承担责任和问责。

3.2.6 Second, and related, FMIs operate in dynamic and changing environments and need mechanisms in place on a continuous basis for making changes, as and when needed, to their design or operations. However, this may not be feasible for certain SA models. Although governance arrangements controlled by software, such as a smart contract, may foster transparency and predictability, governance implemented solely through software is likely to be inflexible in case of a changing environment, as it is not feasible to consider all eventualities and contingencies in a software-based code that is established ex ante. For example, this could be a particular issue during times of crisis, where expert judgment and discretionary decision-making may be required to deal with unforeseen situations, or in instances where there is an identified problem (such as a cyber attack) or an error with the software implementation. In such circumstances, the execution of effective governance is not possible by a smart contract alone (ie without timely human intervention).²⁹ Instead, such circumstances may require a governance arrangement of an SA such that the SA's software for automation or algorithm could be adjusted or altered by natural persons when needed.

其次，与此相关的是，FMI 在动态和不断变化的环境中运行，需要建立持续的机制，以便在需要时对其设计或运作做出改变。然而，这对某些 SA 模式来说可能并不可行。虽然由软件（如智能合约）控制的治理安排可以提高透明度和可预测性，但在环境不断变化的情况下，仅通过软件实施的治理很可能缺乏灵活性，因为在事先制定的基于软件的代码中考虑所有可能发生的情况和突发事件是不可行的。例如，在危机时期，这可能是一个特别的问题，因为在危机时期，可能需要专家判断和酌情决策来应对不可预见的情况，或者在发现问题（如网络攻击）或软件实施出错的情况下。在这种情况下，仅靠智能合约（即没有及时的人工干预）是不可能进行有效治理的。²⁹相反，这种情况可能需要对 SA 进行治理安排，以便在需要时由自然人调整或改变 SA 的自动化软件或算法。

3.2.7 Finally, the governance of other SA functions may impact the ability of the SA to observe Principle 2 and all relevant principles of the PFMI. As noted in Section 1, SAs are often designed in a way that intertwines the transfer function and other SA functions. If these other functions are subject to a separate governance arrangement that does not take into account the risks that those functions pose to the SA's transfer function, governance of the SA's transfer function may be less effective in certain situations.

最后，其他 SA 功能的管理可能会影响 SA 遵守原则 2 和 PFMI 所有相关原则的能力。如第 1 节所述，SA 的设计通常会将转移功能与其他 SA 功能交织在一起。如果这些其他职能受制于单独的治理安排，而没有考虑到这些职能对 SA 转移职能带来的风险，那么在某些情况下，对 SA 转移职能的治理可能会不那么有效。

²⁹ Similarly, while coded governance arrangements on a public ledger may be considered a form of disclosure of governance arrangements to authorities, relevant stakeholders and the general public, the interaction of implemented features in the code, the code's dependence on external inputs (including human interaction), and the risk of errors contained in the code may make the code too complex yet also inadequate as a single source of disclosure or as a basis for achieving accountability. As set forth in Principle 2, KC2 and KC6, and Principle 23, an SA should appropriately document and disclose its governance arrangements. This includes the role of automation and algorithm in the SA's ownership structure, governance and operations.

同样，虽然公共分类账上的编码治理安排可被视为向当局、相关利益攸关方和公众披露治理安排的一种形式，但编码中已实施特征的相互作用、编码对外部输入(包括人与人之间的相互作用)的依赖，以及编码中包含错误的风险，都可能使编码过于复杂，但也不足以作为单一的披露来源或实现问责的基础。正如原则 2、KC2 和 KC6 以及原则 23 所规定的，SA 应适当记录并披露其治理安排。这包括自动化和算法在 SA 的所有权结构、治理和运作中的作用。

Guidance

3.2.8 A systemically important SA should have appropriate governance arrangements. When seeking to observe Principle 2, a systemically important SA should consider how:

具有系统重要性的SA应该有适当的治理安排。在努力遵守原则 2 时，具有系统重要性的 SA 应考虑如何：

- the SA's ownership structure and operation allow for clear and direct lines of responsibility and accountability, for instance, it is owned and operated by one or more identifiable and responsible legal entities that are ultimately controlled by natural persons;

SA 的所有制结构和运作允许明确和直接的责任和问责关系，例如，它是由一个或多个可识别和负责的法律实体拥有和运作的，而这些实体最终由自然人控制；

- the SA's governance allows for timely human intervention, as and when needed, in order to observe Principle 2 and the other relevant principles of the PFMI on a continuous basis; and

SA的管理允许在需要时及时进行人工干预，以便持续遵守原则 2 和 PFMI 的其他相关原则；以及

- the SA's ownership structure and operation allow the SA to observe Principle 2 and the other relevant principles of the PFMI irrespective of the governance arrangements of other interdependent functions.

无论其他相互依存的职能部门的治理安排如何，SA的所有权结构和运作允许SA遵守原则 2 和 PFMI 的其他相关原则。

3.3 Framework for the comprehensive management of risks 全面风险管理框架

Context

3.3.1 Principle 3 of the PFMI aims to promote an integrated and comprehensive view of FMI risks. This includes the risks FMIs bear from and pose to their participants and their customers, as well as other entities, such as other FMIs, banks, liquidity providers and service providers.³⁰ Principle 3 sets the expectation that FMIs should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational and other risks. It states that an FMI should have risk-management policies, procedures and systems that enable it to identify, measure, monitor and manage the range of risks that arise in or are borne by the FMI.³¹ It also clarifies that an FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers and service providers) as a result of interdependencies and develop tools to address them.³²

PFMI 原则 3 旨在促进对 FMI 风险的综合全面认识。这包括FMI从其参与者及其客户，以及其他实体（如其他FMIs、银行、流动性提供者和服务提供者）所承担的风险，以及对其构成的风险。³⁰ 原则 3 规定，FMIs应建立健全的风险管理框架，以全面管理法律、信用、流动性、操作和其他风险。³¹ 该原则还明确指出，FMI应定期审查因相互依存关系而从其他实体(如其他FMIs、结算银行、流动性提供者和服务提供者)承担的对其他实体承担的重大风险，并开发应对这些风险的工具。³²

Issues 问题

3.3.2 The CPMI and IOSCO have identified one broad issue that certain SA models may face when seeking to observe Principle 3.

CPMI 和 IOSCO 发现了某些 SA 模式在寻求遵守第 3 项原则时可能面临的一个广泛问题。

3.3.3 SAs fulfil multiple interdependent functions (see Section 1.4), of which some (ie issuance, redemption and stabilisation of the value of coins and interaction with users) may not fall under the scope of the PFMI as they do not constitute an FMI function. Like other FMIs, SAs may rely for their transfer function on other entities

³⁰ See key consideration 3. 见主要考虑因素3。

³¹ See key consideration 1. 见主要考虑因素1。

³² See key consideration 3. 见主要考虑因素3。

(such as other FMIs, settlement banks, liquidity providers, validating node operators³³ and other node operators, or service providers) that could pose material risks to the function. Furthermore, depending on the SA's organisational structure, the entities that perform other SA functions may be independent from the entity performing the transfer function and/or may not qualify as either participants or service providers to the FMI. Yet, other SA functions and the entities that perform them can have risk implications (legal, credit, liquidity, business, operational, and other risks) on the transfer function, and vice versa. These factors may complicate the SA's task to comprehensively manage risks to observe Principle 3. In addition, multiple interdependent functions may hinder the identification of (responsible) entities that should be brought under the integrated and comprehensive view of FMI risks under Principle 3.

SA履行多种相互依存的功能（见第1.4节），其中一些功能（即硬币的发行、赎回和价值稳定以及与用户的互动）可能不属于PFMI的范围，因为它们不构成FMI功能。与其他FMIs一样，SA的转账功能可能依赖于其他实体（如其他FMIs、结算银行、流动性提供商、验证节点运营商³³和其他节点运营商或服务提供商），这些实体可能会对该功能构成重大风险。此外，根据SA的组织结构，执行其他SA功能的实体可能独立于执行转移功能的实体，并且/或者可能不具备FMI参与者或服务提供者的资格。然而，其他SA功能和执行这些功能的实体可能会对转移功能产生风险影响（法律、信用、流动性、业务、运营和其他风险），反之亦然。这些因素可能会使SA全面管理风险以遵守第3项原则的任务复杂化。此外，多个相互依存的职能可能会妨碍确定应根据原则3以综合全面的视角看待FMI风险的（负责）实体。

Guidance 指南

3.3.4 A systemically important SA should regularly review the material risks that the FMI function bears from and poses to other SA functions and the entities (such as other FMIs, settlement banks, liquidity providers, validating node operators and other node operators, or service providers)³⁴ which perform other SA functions or on which the SA relies for its transfer function. A systemically important SA should develop appropriate risk-management frameworks and tools to address these risks. In particular, it should identify and implement appropriate mitigations, taking an integrated and comprehensive view of its risks.

具有系统重要性的SA应定期审查FMI功能对其他SA功能以及执行其他SA功能或SA依赖其转移功能的实体（例如其他FMI、结算银行、流动性提供者、验证节点运营商和其他节点运营商或服务提供商）承担和构成的重大风险。具有系统重要性的SA应制定适当的风险管理框架和工具来应对这些风险。特别是，它应综合全面地看待其风险，确定并实施适当的缓解措施。

3.4 Settlement finality 最终解决

Context 背景

3.4.1 Principle 8 of the PFMI defines final settlement as “the irrevocable and unconditional transfer of an asset or financial instrument, or the discharge of an obligation by the FMI or its participants in accordance with the terms of the underlying contract”.³⁵ Final settlement (or settlement finality) is a legally defined moment (see also Principle 1 of the PFMI).³⁶ The clarity and certainty of settlement finality is critical for mitigating settlement risk³⁷ which, if not properly managed, could lead to systemic risk. Specifically, Principle 8 of the PFMI states that an FMI's rules and procedures should clearly define the point at which settlement is final.³⁸ It further states that “an FMI should complete final settlement no later than the end of the value date, and preferably intraday or in

³³ Validating nodes operated by independent entities may have a bearing on operational risk to the SA. Whether validating node operators are service providers may depend on the design of the SA and its rules, procedures and contractual arrangements.

由独立实体运营的验证节点可能会对SA的运营风险产生影响。验证节点运营商是否是服务提供商可能取决于SA的设计及其规则、程序和合同安排。

³⁴ See key consideration 3 and paragraph 3.3.7. 见主要考虑因素3和第3.3.7段。

³⁵ CPSS-IOSCO (2012), paragraph 3.8.1. CPSS-IOSCO (2012), 第3.8.1段。

³⁶ CPMI-IOSCO (2012), footnote 86. CPMI-IOSCO (2012), 脚注86。

³⁷ The PFMI define settlement risk as “the general term used to designate the risk that settlement in a funds or securities transfer system will not take place as expected. This risk may comprise both credit and liquidity risk”. See Annex H of CPSS-IOSCO (2012).

PFMI将结算风险定义为“用于指代资金或证券转账系统中结算无法按预期进行的风险的总称。这种风险可能包括信用风险和流动性风险”。见CPSS-IOSCO (2012) 附件H。

³⁸ See key consideration 1. 见主要考虑因素1。

real time, to reduce settlement risk”,³⁹ and clearly define the point after which unsettled payments, transfer instructions or other obligations may not be revoked by a participant.⁴⁰ Depending on the type of obligations that an FMI settles, the use of intraday settlement may be necessary or desirable to reduce settlement risk.⁴¹ It also states that “the legal basis governing an FMI, including the insolvency law, must acknowledge the discharge of a payment, transfer instruction, or other obligation between the FMI and system participants, or between or among participants, for the transaction to be considered final”.⁴²

PFMI 原则 8 将最终结算定义为“FMI 或其参与者根据基础合同的条款不可撤销且无条件地转让资产或金融工具，或履行义务”。³⁵最终结算（或结算终局性）是法律定义的时刻（另见 PFMI 的原则 1）³⁶。结算终局性的清晰度和确定性对于降低结算风险至关重要，如果管理不当，可能会导致系统性风险。³⁷具体而言，PFMI 的原则 8 规定，FMI 的规则和程序应明确定义最终结算的时间点。³⁸它进一步指出，“FMI 应在起息日结束前完成最终结算，最好是在当天或实时完成，以降低结算风险”³⁹，并明确规定参与者不得撤销未结算付款、转账指示或其他义务的时间点。⁴⁰取决于 FMI 所清偿的债务类型，为了降低结算风险，使用即日结算可能是必要或可取的。⁴¹它还指出，“管辖 FMI 的法律依据，包括破产法，必须承认 FMI 与系统参与者之间或参与者之间付款、转账指令或其他义务的履行，才能使交易被视为最终交易”。⁴²

Issues 问题

3.4.2 The CPMI and IOSCO have identified one broad issue that certain SA models may face when seeking to observe Principle 8.

CPMI 和 IOSCO 发现了某些 SA 模式在寻求遵守第 8 项原则时可能面临的一个广泛问题。

3.4.3 SAs may feature “probabilistic settlement”, where a misalignment between the state of the ledger and legal finality may occur. A misalignment occurs, for example, because the probability of revocation of a transaction validated by nodes converges to, but never reaches, zero with the passage of time with certain consensus mechanisms used, or because a “fork” occurs.⁴³ With probabilistic settlement, even if the relevant legal framework and the SA’s rules and procedures have defined the point at which final settlement occurs, the possibility remains that the validation of a transaction on the ledger (technical settlement⁴⁴) can never be achieved with absolute certainty or forks emerge that could lead to a revocation of transactions validated on competing (and later discarded) forked ledger(s). The probability for a given state of the ledger to be conclusive increases as more transactions are added to the ledger. At the same time, the settlement risk implications of a fork increase with the number of transactions added to the ledger, as they are subject to a potential revocation. Clearly defining and implementing the point at which settlement is final and – in accordance with Principle 8 – may be challenging for certain types of SAs that may feature probabilistic settlement. As in the case of other FMIs, “[because] of the complexity of legal frameworks and system rules, particularly in the context of cross-border settlement where legal frameworks are not harmonised, a well-reasoned [and independent] legal

³⁹ See key consideration 2. 见主要考虑因素 2。

⁴⁰ See key consideration 3. 见主要考虑因素 3。

⁴¹ See CPMI-IOSCO (2012), paragraph 3.8.6 见 CPMI-IOSCO (2012)，第 3.8.6 段。

⁴² CPSS-IOSCO (2012), paragraph 3.8.4. CPSS-IOSCO (2012)，第 3.8.4 段。

⁴³ The FSB describes a “hard fork” as a bifurcation in a distributed ledger whereby separate and irreconcilable ledgers are created usually due to an unresolved disagreement among developers or other actors such as miners associated with a distributed ledger (See FSB (2019), p 23, footnote 82). However, forks can also result more generally from changes of the code in the underlying protocol which are incompatible with the previous version (See IOSCO (2020)).

金融稳定委员会将“硬分叉”描述为分布式账本的分叉，通常由于开发者或其他参与者（如与分布式账本相关的矿工）之间的分歧未得到解决，从而产生了独立且不可调和的账本（见金融稳定委员会（2019），第 23 页，脚注 82）。然而，分叉也可能是由于底层协议中的代码发生了与前一版本不兼容的变化（见 IOSCO (2020)）。

⁴⁴ Technical settlement (or operational settlement) describes the point in time at which the state of an SA’s electronic ledger reflects that a transaction has occurred. In some DLT arrangements, it can take time to update and synchronise changes to the ledger of each node. The first instance of an update may not represent technical settlement because it may take time for consensus to be achieved across the nodes in the synchronisation of ledgers. In arrangements that use a proof-of-work or other consensus mechanisms, technical settlement is probabilistic (“probabilistic settlement”).

技术结算（或运行结算）是指 SA 电子分类账的状态反映交易已经发生的时间点。在某些 DLT 安排中，更新和同步每个节点分类账的变化可能需要时间。第一次更新可能并不代表技术结算，因为各节点在同步分类账时达成共识可能需要时间。在使用工作证明或其他共识机制的安排中，技术结算是概率性的（“概率结算”）。

opinion is generally necessary to establish the point at which finality takes place.”⁴⁵ This is relevant for SAs because of notable SA features (see Section 1.4) and particularly so for some of the SAs because of their potential role in cross-border payments.

SA 可能具有“概率结算”的特点，在这种情况下，分类账的状态与法律的终局性之间可能会发生错位。例如，随着时间的推移，节点验证的交易撤销概率会趋同于零，但在某些共识机制中却永远不会达到零，或者因为发生了“分叉”，就会出现错位。⁴³ 在概率结算中，即使相关法律框架和 SA 的规则和程序已经规定了最终结算发生的时间点，但仍有可能出现这样的情况：交易在分类账上的验证（技术结算⁴⁴）永远无法绝对确定地实现，或者出现分叉，导致在竞争的（后来被废弃的）分叉分类账上验证的交易被撤销。随着更多的交易被添加到分类账中，分类账的特定状态成为定论的概率也会增加。与此同时，分叉的结算风险也会随着添加到分类账中的交易数量的增加而增加，因为这些交易可能会被撤销。根据原则 8，明确定义和实施最终结算的时间点，对于某些可能具有概率结算特点的 SA 来说可能具有挑战性。正如其他 FMI 一样，“[由于]法律框架和系统规则的复杂性，特别是在法律框架不统一的跨境结算中，通常需要一个理由充分的[和独立的]法律意见来确定最终结算发生的时间点”。⁴⁵ 这一点与 SAs 有关，因为 SA 具有显著的特点（见第 1.4 节），尤其是对某些 SAs 而言，因为它们在跨境支付中具有潜在的作用。

3.4.4 This situation with a misalignment between legal finality and the state of the ledger may be exacerbated in the absence of a legal entity responsible for the SA’s transfer function (see Section 3.1), including for setting and maintaining the rules and procedures to be followed in case of transaction revocations and forks. Without a responsible legal entity, there may be no way to enforce the legal finality of a transaction or the resulting legal claim if it conflicts with the settlement status on the ledger. Also, in the event of a fork, transactions with technical settlement could continue on the forked ledger. Where this happens, new transactions on the forked ledger may eventually also have achieved technical settlement and be considered final (as far as the rules and procedures of the forked ledger is concerned), but they may still be subject to a partial or full revocation – through legal action taken outside the system – due to the valid legal claims that are not represented on the forked ledger.

如果没有一个法律实体负责 SAs 的转移功能（见第 3.1 节），包括制定和维护交易撤销和分叉时应遵循的规则和程序，则法律终局性与分类账状态错位的情况可能会更加严重。在没有一个负责的法律实体的情况下，如果交易的法律终局性和法律索赔与分类账上的结算状态相冲突，则可能就无法执行交易的法律终局性或由此产生的法律索赔。此外，在分叉的情况下，技术结算的交易可能会在分叉的分类账上继续进行。在这种情况下，分叉分类账上的新交易可能最终也实现了技术结算，并被视为最终交易（就分叉分类账的规则和程序而言），但由于有效的法律主张没有在分叉分类账上体现，这些交易仍可能通过系统外的法律行动被部分或全部撤销。

3.4.5 Moreover, settlement finality aims at ensuring protection against revocation in case of insolvency of one or more participant(s) or the settlement operator(s), ie ensuring that transactions of an insolvent entity settled with finality is honoured as final, and is not considered void or voidable by liquidators and relevant authorities.⁴⁶ While a fork may not constitute a revocation in this sense, it may have similar adverse consequences for acquired positions of transferees as well as subsequent onwards transfers. In light of such scenarios, an SA should have measures in place to prevent any misalignments between the legal state of the transferred stablecoin and its state on the ledger. In addition to these measures and not in lieu of them, an SA should have measures in place to address risks that could arise for the SA, its users or other relevant entities in the event of a subsequent revocation of transactions on the ledger.

此外，结算终局性旨在确保在一个或多个参与者或结算运营商破产的情况下不被撤销，即确保以终局性结算的破产实体的交易被视为终局交易，并且不被清算人和相关当局视为无效或可撤销。⁴⁶ 虽然分叉可能不构成这种意义上的撤销，但它可能会对受让人的已获头寸以及随后的接续转让产生类似的不利后果。鉴于这种情况，SA 应采取措施，防止被转让稳定币的法律状态与其在分类账上的状态不一致。除了这些措施外，SA 还应制定措施，以应对在随后撤销分类账上的交易时可能给 SA、其用户或其他相关实体带来的风险。

⁴⁵ CPSS-IOSCO (2012), paragraph 3.8.4. See also paragraph 3.1.3. CPSS-IOSCO (2012), 第 3.8.4 段。另见第 3.1.3 段。

⁴⁶ See CPSS-IOSCO (2012), paragraph 3.1.6. 见 CPSS-IOSCO (2012), 第 3.1.6 段。

Guidance 指南

3.4.6 A systemically important SA should provide clear and certain final settlement, at a minimum by the end of the value date, regardless of the operational settlement method used. Where necessary or preferable, such settlement should be provided on an intraday or real-time basis. When seeking to observe Principle 8, a systemically important SA should:

具有系统重要性的 SA 应提供清晰和确定的最终结算，无论它使用何种操作结算方法，至少应在价值日期结束前提供，。在必要或可取的情况下，应在当日或实时基础上提供这种结算。在遵守第 8 项原则时，具有系统重要性的 SA 应：

- clearly define the point at which a transfer of a stablecoin through the operational settlement method used becomes irrevocable and unconditional;

明确界定通过运营结算方法的使用而使稳定币转账变成不可撤销和无条件转账的时间点；

- ensure that there is a clear legal basis that acknowledges and supports finality of a transfer; and

确保有明确的法律依据，承认并支持转让的终局性；以及

- have robust mechanism(s) for preventing any misalignment between the state of the ledger and legal finality and ensure that legal finality of a transfer, once it has occurred, is maintained regardless of competing state(s) of the ledger.

拥有健全的机制，防止分类账状态与法律终局性之间出现任何错位，并确保转账一旦发生，无论分类账处于何种竞争状态，都能保持法律终局性。

3.5 Money settlements 钱款结算

Context 背景

3.5.1 Principle 9 of the PFMI sets the expectations for the settlement asset(s) of an FMI. Settlement assets are transferred among FMI participants to settle payment obligations.⁴⁷ Settlement of a transaction can occur on an FMI's own books, on the books of another FMI, or on the books of an external party (for example, a central bank or commercial bank). Principle 9 states that "[a]n FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money".

PFMI 原则 9 规定了对 FMI 结算资产的预期。为了履行付款义务，结算资产会在 FMI 参与者之间转移。⁴⁷ 交易结算可在 FMI 自身账簿、另一 FMI 账簿或外部方（如中央银行或商业银行）账簿上进行。原则 9 规定，"FMI 应在实际可行的情况下使用中央银行货币进行货币结算。如果不使用中央银行货币，FMI 应尽量减少并严格控制因使用商业银行货币而产生的信贷和流动性风险"。

3.5.2 Participants of an FMI may hold settlement assets intraday or overnight to settle their payment obligations. However, if participants hold settlement assets, they can face both credit and liquidity risks from the settlement asset. They face credit risk if the provider of the settlement asset could default on its obligation to them and liquidity risk if the asset ceases to be readily transferable, for example into claims on a central bank or other liquid assets. Where these risks exist, they can have systemic implications, because all participants holding the settlement asset are exposed to them simultaneously. This makes it highly desirable for there to be no risk that the provider of the settlement asset will default.

FMI 的参与者可在当日或隔夜持有结算资产，以履行其支付义务。然而，如果参与者持有结算资产，他们可能面临来自结算资产的信用风险和流动性风险。如果结算资产的提供者不履行义务，参与者就会面临信用风险；如果结算资产不再容易转让，例如变成对中央银行的债权或其他流动资产，参与者就会面临流动性风险。而如果确实存在上述风险，那么它还会产生系统性影响，因为持有结算资产的所有参与者

⁴⁷ In other words, settlement assets are the assets that the participant receiving the payment ends up holding when the original payment obligation is fully extinguished.

换句话说，结算资产是在原始付款义务完全消灭后，收到付款的参与人最终持有的资产。

都会同时面临上述风险。因此，最好不存在结算资产提供者违约的情形。

3.5.3 The goal of Principle 9 is for FMIs to use central bank money where practical and available or to otherwise use a settlement asset with little or no credit and liquidity risk that is readily convertible into central bank money or other liquid assets in both normal and stressed circumstances. One of the fundamental purposes of central banks is to provide a safe and liquid settlement asset.⁴⁸ In less usual circumstances, the settlement asset can be a claim on a private, supervised institution, for example on a commercial settlement bank. Balances on the books of a commercial bank can be transferred among payment system participants' accounts with that bank. However, in these cases, unlike the case of balances at the central bank of issue of the currency, participants are subject to the credit and liquidity risks of the commercial bank providing the settlement asset.

原则 9 的目标是让 FMIs 在实际可行的情况下使用中央银行的货币，或者使用信用和流动性风险很小或没有信用和流动性风险的结算资产，这种资产在正常和紧张的情况下都可以随时转换成中央银行的货币或其他流动性资产。中央银行的基本宗旨之一就是提供安全和流动的结算资产。⁴⁸ 在不太常见的情况下，结算资产可以是对私人或受监督机构的债权，例如对商业结算银行的债权。商业银行账簿上的余额可以在支付系统参与者所有的该银行的账户之间转移。然而，在这种情况下，与在中央银行的余额不同，参与者要承受提供结算资产的商业银行的信贷和流动性风险。

3.5.4 In order for the use of commercial bank money as a settlement asset to comply with Principle 9 as an acceptable alternative to central bank money, Principle 9 states that the asset must have little or no credit or liquidity risk.⁴⁹ Principle 9 sets out the relevant factors to determine whether, in cases where the settlement asset is privately issued by a commercial bank or the FMI itself (an FMI that settles on its own books), the additional credit and liquidity risks have been minimised and strictly controlled.⁵⁰ For example, if the commercial bank conducting settlement on its books becomes insolvent, the FMI and its participants may not have immediate access to their settlement funds or ultimately receive the full value of their funds.⁵¹ To this end, an FMI should limit both the probability of being exposed to a commercial settlement bank's failure and limit the potential losses and liquidity pressure to which it would be exposed in the event of such a failure. An FMI should establish and monitor adherence to strict criteria for its commercial settlement banks that take into account, among other things, their effective regulation and supervision, creditworthiness, capitalisation, access to liquidity and operational reliability.⁵²

为了使使用商业银行货币作为结算资产符合原则 9，从而作为中央银行货币的可接受替代品，原则 9 规定该资产必须具有很少或没有信用或流动性风险。⁴⁹ 原则 9 规定了相关因素，以确定在结算资产由商业银行或 FMI 本身（以自己的账簿结算的 FMI）私人发行的情况下，额外的信用和流动性风险是否已降至最低并受到严格控制。⁵⁰ 例如，如果对其账簿进行结算的商业银行资不抵债，FMI 及其参与者可能无法立即使用其结算资金或最终获得其资金的全部价值。⁵¹ 为此，FMI 应限制商业结算银行倒闭的可能性，并限制其在此类倒闭时可能面临的潜在损失和流动性压力。FMI 应制定并监督其商业结算银行遵守严格的标准，其中包括其有效监管和监督、信用度、资本化、流动性和经营可靠性等。⁵²

Issues 问题

3.5.5 The CPMI and IOSCO have identified one broad issue that certain SAs may face when seeking to observe Principle 9.

⁴⁸ The term "ultimate settlement" is sometimes used to denote final settlement in central bank money. This combines the concept of settlement being final with the concept of the settlement asset being the least risky possible. Claims on the central bank are typically free of the credit and liquidity risks associated with settlement assets. Where this is the case, "ultimate settlement" would denote final settlement in central bank money (See CPSS (2003), p 14, Box 2).

"最终结算"一词有时被用来表示以中央银行货币进行的最终结算。这结合了最终结算的概念和结算资产尽可能风险最小的概念。对中央银行的债权通常没有与结算资产相关的信贷和流动性风险。在这种情况下，"最终结算"指的是以中央银行货币进行最终结算（见 CPSS (2003)，第 14 页，方框 2）。

⁴⁹ See key consideration 2. 见主要考虑因素 2。

⁵⁰ See key considerations 3–5. 见主要考虑因素 3-5。

⁵¹ CPSS-IOSCO (2012), paragraph 3.9.4. CPSS-IOSCO (2012)，第 3.9.4 段。

⁵² CPSS-IOSCO (2012), paragraph 3.9.5 CPSS-IOSCO (2012)，第 3.9.5 段。

CPMI 和 IOSCO 发现了某些SAs在遵守第 9 项原则时可能面临的一个大问题。

3.5.6 A privately issued settlement asset should have little or no credit or liquidity risk to be considered as an acceptable alternative to the use of central bank money to observe Principle 9. In SAs, as a stablecoin is used as the settlement asset, participants will be subject to the credit and liquidity risks of the stablecoin itself, the issuer of the stablecoin and/or the settlement institution.⁵³ This may result in a greater amount of risk than “little to no” credit and liquidity risk and may not enable the FMI and its participants to readily transfer their assets into other liquid assets, such as claims on a central bank.

为了遵守原则9，私人发行的结算资产应该只有很小或没有信用或流动性风险，从而才能被认为是使用央行货币的替代方案。在 SAs 中，由于使用稳定币作为结算资产，参与者将受到稳定币本身、稳定币发行者和/或结算机构的信用和流动性风险的影响。⁵³ 这可能导致比“几乎没有”信用和流动性风险更大的风险，并且可能使金融中介机构及其参与者无法随时将其资产转移到其他流动性资产中，例如对中央银行的债权。

3.5.7 Stablecoins may be backed with underlying funds, securities or other assets (collectively, “reserve assets”). The funds received from SA participants can be, for example: (i) deposited at commercial banks; (ii) deposited at central banks; or (iii) invested in safe and liquid assets that will then be held at custodians.⁵⁴ The manner and extent to which the reserve assets serve as backing depends on the design and associated contractual arrangements of the stablecoin in question as well as applicable law.⁵⁵ These will have significant implications for the level of protection of rights of holders of the stablecoin and other relevant SA participants and their confidence in the value of the stablecoin as a settlement asset, and therefore needs to be clarified by the SA and made transparent to SA holders and participants. Further, the level of protection and confidence will also rely on the sufficiency of the regulatory and supervisory framework that applies to the issuer, reserve managers and custodians of reserve assets.

稳定币可由基础资金、证券或其他资产（统称“储备资产”）支持。例如，从 SA 参与者处收到的资金可以：(1) 存入商业银行；(2) 存入中央银行；或 (3) 投资于由托管人持有的安全和流动性资产。⁵⁴ 储备资产作为支持的方式和程度取决于有关稳定币的设计和合同安排以及适用法律。⁵⁵ 这些将对稳定币持有人和其他相关 SA 参与者的权利保护水平以及他们对稳定币作为结算资产的价值信心产生重大影响，因此需要由 SA 澄清并向 SA 持有人和参与者保持透明。此外，保护和信心水平还取决于适用于发行人、储备管理人和储备资产保管人的监管和监督框架是否充分。

3.5.8 Participants may be exposed to credit risk if a stablecoin loses value relative to the sovereign currency in which it is denominated or to which it is pegged, or if the issuer of the stablecoin defaults on its obligations to the participant. Participants may face liquidity risk if a stablecoin cannot promptly be converted into other liquid assets. Under some SA models, the settlement institution (“the provider of the settlement account”) and the stablecoin issuer (“the provider of the settlement asset”) can be two different institutions, with the SA

⁵³ The institution across whose books transfers between participants take place in order to achieve settlement within a system. A settlement account is an account held at a central bank or any other institution acting as a settlement agent, which is used to settle transactions between participants in a system.

该机构在其账簿上处理参与者之间的转账，以实现系统内的结算。结算账户是由中央银行或其他作为结算代理机构持有的账户，用于系统内参与者之间的交易结算。

⁵⁴ The term “custodians” in this report includes central securities depositories. 本报告中的“保管人”一词包括中央证券保管机构。

⁵⁵ For example, a stablecoin holder may have an individual direct claim (determined pro rata by the units it holds) on the underlying funds at the issuer’s (or its reserve manager’s) account with its bank(s). Alternatively, a stablecoin holder may have a beneficial interest in (a trust created upon) the underlying funds. In another setting a stablecoin holder may not have any direct or indirect claim on, title to or interests in the underlying funds; but only a claim on the issuer, whose financial ability to redeem at par would be supported, but not necessarily guaranteed, by the existence of the underlying funds. In the case of underlying securities, the securities holding model in the law of the relevant jurisdiction would play an important role in determining the nature of the stablecoin holder’s relationship with the custodians and underlying securities. Securities holding models vary across jurisdictions.

例如，稳定币持有者可以在发行者（或其储备经理）在银行开立的账户上对基础基金拥有个人直接债权（根据其持有的单位按比例确定）。或者，稳定币持有者可以拥有基础基金的受益权（在基础基金上设立的信托）。在另一种情况下，稳定币持有人可能对基础基金没有任何直接或间接的要求权、所有权或权益；而只是对发行人有要求权，发行人按面值赎回的财务能力将得到基础基金存在的支持，但不一定得到保证。就基础证券而言，相关司法管辖区法律中的证券持有模式将在确定稳定币持有人与托管人和基础证券的关系性质方面发挥重要作用。不同司法管辖区的证券持有模式各不相同。

providing participants with settlement accounts on its own books for a stablecoin as a settlement asset issued by a third party.⁵⁶ Under these models, participants may be subject to credit⁵⁷ and liquidity risk from both the issuer and settlement account provider. For example, operational issues with record keeping relating to the ownership of a stablecoin at the SA could delay prompt redemptions from the issuer.⁵⁸ Measures to address these risks could include collateral pools supporting committee lines of credit, third-party guarantees and procedures for allocating losses arising from a default by the issuer or a decrease in value of the stablecoin.

如果稳定币相对于其计价或挂钩的主权货币贬值，或者如果稳定币的发行商违约，参与者可能会面临信用风险。如果稳定币无法及时转换为其他流动性资产，参与者可能面临流动性风险。在某些 SA 模式下，结算机构（“结算账户的提供者”）和稳定币发行商（“结算资产的提供者”）可以是两个不同的机构，SA 为参与者提供自己账簿上的稳定币结算账户，作为第三方发行的结算资产⁵⁶。在这些模式下，参与者可能面临来自发行商和结算账户提供商的信用⁵⁷和流动性风险。例如，与 SA 稳定币所有权相关的记录保存操作问题可能会延迟发行人的及时赎回。⁵⁸ 应对这些风险的措施可能包括支持委员会信用额度的抵押品池、第三方担保以及分配因发行人违约或稳定币价值下跌而产生的损失的程序。

3.5.9 In addition, stablecoins may be vulnerable to confidence effects or “run risk”. If the reserve assets are insufficient or cannot be liquidated at or close to market values in a timely manner when needed, the stablecoin may lose value and create credit or liquidity risk for participants of the SA, leading to loss of confidence. If participants in the SA lose confidence in the value of the stablecoin or in their ability to convert it at par into other liquid assets – like claims on the central bank – this may result in large-scale redemptions. This in turn could lead to large-scale “fire sales” of reserve assets, further reductions in the value of the stablecoin and further redemptions. These confidence effects can have systemic implications if they spread to non-retail participants (eg financial institutions) that hold the stablecoins or to financial assets in which the stablecoin’s reserve assets are invested. If not properly monitored, mitigated and managed, these risks may be greater for a stablecoin than for commercial bank money.

此外，稳定币可能容易受到信心效应或“挤兑风险”的影响。如果储备资产不足，或在需要时不能及时以市值或接近市值的价格变现，稳定币可能会贬值，给 SA 参与者带来信用或流动性风险，导致信心丧失。如果 SA 参与者对稳定币的价值或按面值将其转换为其他流动资产（如对中央银行的债权）的能力失去信心，可能会导致大规模赎回。这反过来又可能导致储备资产的大规模“甩卖”、稳定币价值的进一步降低和更多的赎回。如果这些信心效应扩散到持有稳定币的非零售参与者（如金融机构）或稳定币储备资产投资的金融资产，就会产生系统性影响。如果没有适当的监测、缓解和管理，这些风险对于稳定币来说可能比商业银行货币更大。

3.5.10 Lastly, there are a number of different SA issuance, stabilisation and redemption models. These models are intrinsically intertwined with the safety and efficiency of an SA’s transfer function. Some nonbank SAs may issue stablecoins that represent assets held in safeguarded custody in the name of the SA rather than stabilising the stablecoin’s value by actively managing a reserve asset. When an SA receives assets from its participants – and uses them to back the value of the stablecoin – the SA and its participants could face credit and possibly liquidity risk if the custodian of the assets defaults on their obligations to the SA or its participants. An SA should place, safeguard or invest those assets in a way that minimises the risk of loss on and delay in access to

⁵⁶ Typically, an FMI’s settlement institution(s) provide participants with the settlement asset as well as their settlement accounts, ie the books upon which settlement account balances and positions are recorded, updated and maintained. For example, central bank money is a liability of a central bank in the form of deposits held at the central bank which can be used for settlement purposes. Commercial bank money is the liability of a commercial bank in the form of deposits held at the commercial bank. When an FMI settles on its own books, it offers cash accounts to its participants, and a payment or settlement obligation is discharged by providing an FMI’s participants with a direct claim on the FMI itself.

通常情况下，金融基础设施的结算机构向参与者提供结算资产及其结算账户，即记录、更新和维护结算账户余额和头寸的账簿。例如，中央银行货币是中央银行的负债，其形式是存放在中央银行的存款，可用于结算目的。商业银行货币是商业银行的负债，其形式是存放在商业银行的存款。当金融市场指数在自己的账簿上进行结算时，它向其参与者提供现金账户，通过向金融市场指数的参与者提供对金融市场指数本身的直接债权来履行支付或结算义务。

⁵⁷ For example, if the settlement institution becomes insolvent, and it has poor record keeping in place for its participants, the ability to facilitate redemption of settlement assets may not be possible or the settlement assets may not be accessible at all or may be lost.

例如，如果结算机构资不抵债，而且对其参与者的记录保管不善，就可能无法为赎回结算资产提供便利，或者根本无法获得或丢失结算资产。

⁵⁸ See also Principle 17 on operational risk in CPSS-IOSCO (2012). 另见 CPSS-IOSCO (2012) 中关于操作风险的原则 17。

those assets, and enables the stablecoin as a settlement asset to have little or no credit or liquidity risk. (See also Principle 16 of the PFMI on custody and investment risks.)

最后，有许多不同的 SA 发行、稳定和赎回模式。这些模式与 SA 转移功能的安全性和效率有着内在联系。一些非银行的 SAs 可能发行稳定币，用以代表以 SA 名义进行安全保管的资产，而不会通过积极管理储备资产来稳定稳定币的价值。当 SA 从其参与者处收到资产并用其支持稳定币的价值时，如果资产托管人不履行对 SA 或其参与者的义务，SA 及其参与者可能面临信用风险，甚至可能面临流动性风险。SA 在放置、保护或投资这些资产时，应尽量减少损失和延迟使用这些资产的风险，并使作为结算资产的稳定币几乎没有信用或流动性风险。（另见 PFMI 关于保管和投资风险的原则 16）。

Guidance 指南

3.5.11 A stablecoin used by a systemically important SA for money settlements should have little or no credit or liquidity risk. In assessing the risk presented by the stablecoin, the SA should consider whether the stablecoin provides its holders with a direct legal claim on the issuer and/or claim on, title to or interest in the underlying reserve assets for timely⁵⁹ convertibility at par into other liquid assets, such as claims on a central bank, and a clear and robust process for fulfilling holders' claims in both normal and stressed times.

具有系统重要性的 SA 用于货币结算的稳定币应该几乎没有信用或流动性风险。在评估稳定币带来的风险时，SA 应考虑稳定币是否为其持有者提供了对发行者的直接法律索偿权和/或对基础储备资产的索偿权、所有权或权益，以便及时⁵⁹，按面值兑换成其他流动资产，如对中央银行的索偿权，以及在正常和紧张时期履行持有者索偿权的明确而稳健的程序。

3.5.12 When seeking to observe Principle 9, a systemically important SA should determine whether the credit and liquidity risks of the stablecoin that it uses for money settlements are minimised and strictly controlled and the stablecoin is an acceptable alternative to the use of central bank money. Relevant factors may include but are not limited to:

在寻求遵守原则 9 时，具有系统重要性的 SA 应确定其用于货币结算的稳定币的信用和流动性风险是否被最小化和严格控制，以及稳定币是否是使用中央银行货币的可接受替代品。相关因素可能包括但不限于：

- The clarity and enforceability of the legal claims, titles, interests and other rights and protections accorded to holders of the stablecoin and SA participants in relation to the issuer of a stablecoin and reserve assets backing it, including their treatment (eg seniority) in the event of insolvency of the issuer, its reserve manager or a custodian of the reserve assets and/or other protections such as third party guarantees.

给予稳定币持有人和 SA 参与者的与稳定币发行人和支持稳定币的储备资产有关的法律索赔、所有权、利益和其他权利及保护的明确性和可执行性，包括在发行人、其储备管理人或储备资产保管人破产和/或第三方担保等其他保护情况下的待遇（如优先权）。

- The nature and sufficiency of the SA's reserve assets to support and stabilise the value of the outstanding stock of issued stablecoins, and the degree to which the SA's reserve assets could be liquidated at or close to prevailing market prices.

SA 储备资产的性质和是否足以支持和稳定已发行的稳定币的价值，以及 SA 储备资产可以按照或接近现行市场价格变现的程度。

- The clarity, robustness and timeliness of the process for converting the stablecoin into other liquid assets such as claims on a central bank in both normal and stressed circumstances. The stablecoin should be convertible into other liquid assets, as soon as possible, at a minimum by the end of the day and ideally intraday.

在正常和紧张的情况下，将稳定币转换为其他流动资产（如对中央银行的债权）的过程要清晰、稳健和及时。稳定币应尽快转换为其他流动资产，至少在当日结束前，最好在当日内。

- The creditworthiness, capitalisation, access to liquidity and operational reliability of the issuer of the stablecoin, provider of the settlement accounts and custodian(s) of the reserve assets. Reserve assets held or

placed in custody should be protected against claims of a custodian's creditors. Any chosen custodians should have robust accounting practices, safekeeping procedures and internal controls to protect the assets, as well as a sound legal basis supporting its activities, including the segregation of assets.

稳定币发行方、结算账户提供方和储备资产托管方的信用度、资本化程度、流动性和运营可靠性。持有或托管的储备资产应受到保护，并免受托管人债权人的索赔。任何选定的托管人都应具备健全的会计实务、安全保管程序和内部控制，以保护资产，并有健全的法律基础支持其活动，包括资产隔离。

- The sufficiency of the regulatory and supervisory framework that applies to the issuer, reserve manager(s) and/or custodian(s) of the reserve assets.

适用于储备资产发行人、储备管理人和/或保管人的监管和监督框架是否充分。

- The existence of risk controls that could, where needed, reduce credit and/or liquidity risks. Possible examples include collateral pools supporting committed lines of credit, third party guarantees and procedures for allocating losses arising from a default by the issuer or a decrease in value of the stablecoin.

存在风险控制措施，可在必要时降低信用和/或流动性风险。可能的例子包括支持已承诺信贷额度的抵押品池、第三方担保以及分配因发行人违约或稳定币价值下降而造成的损失的程序。

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Annex A: Questions asked in the consultation 附件A：咨询中提出的问题

Applicability of the PFMI to SAs PFMI 对 SA 的适用性

1. Is it clear when SAs are considered FMIs for the purposes of applying the PFMI? 在应用 PFMI 时，何时将 SA 视为 FMI?

Considerations for determining the systemic importance of an SA 确定一项SA的系统重要性的考虑因素

2. Are the suggested considerations for determining the systemic importance of SAs clear, comprehensive and useful? Are there any risks or considerations missing?

为确定 SA 的系统重要性而建议的考虑因素是否清晰、全面和有用？是否遗漏了任何风险或考虑因素？

Governance 管理

3. Is the guidance provided on governance clear and actionable to inform how SAs will need to ensure clear and direct lines of accountability and set up governance arrangements to observe the PFMI?

所提供的治理指导是否清晰、可操作，以告知SA需要如何确保明确、直接的责任关系，并建立治理安排以遵守 PFMI？

4. What are the challenges that SAs may face due to the use of distributed and/or automated technology protocols and decentralisation, when seeking to observe Principle 2 on governance, in particular when ensuring the clear allocation of responsibility and accountability?

由于使用分布式和/或自动化技术协议和权力下放，在寻求遵守关于治理的原则 2 时，特别是在确保明确分配责任和问责时，SAs可能面临哪些挑战？

Interdependencies 相互依存

5. Is the guidance on Principle 3 clear and actionable to inform how SAs will need to comprehensively manage risks from other SA functions and entities and their interdependencies?

关于原则 3 的指导是否明确、可操作，以告知 SAs如何需要全面管理来自其他 SA 职能和实体及其相互依存关系的风险？

Settlement finality 结算终局性

6. Is the guidance on Principle 8 on settlement finality clear and actionable to inform how SAs will need to manage risks arising from a misalignment between technical and legal finality?

关于结算终局性的原则 8 的指导是否明确和可操作，以告知 SAs 如何管理因技术终局性和法律终局性不一致而产生的风险？

Money settlements 资金结算

7. Is the guidance on Principle 9 on money settlements clear and actionable to inform how SAs will need to manage risks associated with the use of a stablecoin as a settlement asset? In particular, is the guidance clear on the considerations which an SA should take into account when choosing a stablecoin as a settlement asset with little or no credit or liquidity risk as an appropriate alternative to central bank money?

关于货币结算的原则 9 的指导是否明确和可操作，以告知 SAs 如何管理与使用稳定币作为结算资产相关的风险？特别是，指导意见是否清楚地说明了 SA 在选择稳定币作为结算资产时应考虑的因素？这种稳定

币作为中央银行货币的适当替代品，几乎没有信用或流动性风险。

General 一般情况

8. Are there other issues or principles of the PFMI where additional guidance for SAs would be useful? If so, what is the issue identified and how is it notable for SAs?

在PFMI的其他问题或原则中，对SA的额外指导是否有用？如果是这样，确定的问题是什么，SA的注意事项是什么？

9. Are there any terms used in this report for which further clarification would be useful for SAs when seeking to observe the PFMI?

本报告中是否有任何术语需要进一步澄清，以帮助 SAs遵守 PFMI。

Annex B: Functions and activities in a stablecoin arrangement

附件 B：稳定币 安排中的职能和活动

Table B1 表 B1

| Funtions 功能 | Activities 活动 | Operational design elements 运行设计要素 |
|---|---|--|
| Governance of the arrangement 安排的管理 | Establishing rules governing the stablecoin arrangement 制定管理稳定币安排的规则 | <p>The rules covering, among other issues, the types of entities that could be involved in the arrangement, the protocol for validating transactions, the mechanism for stabilising the value of the stablecoin, and the arrangements for the management and ownership of the reserve assets. Generally, a governance body is essential to a stablecoin arrangement and also may have a role in promoting adherence to common rules across the stablecoin arrangement</p> <p>除其他问题外，这些规则涵盖可参与安排的实体类型、验证交易的协议、稳定稳定币价值的机制以及储备资产的管理和所有权安排。一般来说，管理机构对稳定币安排是必不可少的，它还可以在促进遵守整个稳定币安排的共同规则方面发挥作用</p> |
| Issuance, redemption and stabilisation of value of coins 硬币的发行、兑换和价值稳定 | <p>Issuing, creating and destroying stablecoins 发行、创建和销毁稳定币</p> <p>Managing reserve assets 管理储备资产</p> | <p>The mechanism through which stablecoins may be issued or created, and subsequently destroyed by one or more entities or software protocols designed by these entities. 一个或多个实体或由这些实体设计的软件协议发行或创建稳定币并随后销毁稳定币的机制。</p> <p>The activity of managing the assets that are “backing” the value of a stablecoin, where a stablecoin fully or partially maintains its value or confidence in its value based on real or financial assets or other cryptoassets. This may involve buying and selling assets based on an investment policy. The activity may also be undertaken by using software protocols that adjust the composition of the reserve through smart contracts and algorithmic decision-making. 管理“支持”稳定币价值的资产的活动，稳定币完全或部分保持其价值和对自己价值的信心是建立在某些实物或金融资产或其他加密资产的基础上的。这可能涉及根据投资政策买卖资产。这项活动也可以通过使用软件协议来进行，这些软件协议可以通过智能合约和算法决策调整储备的构成。</p> |
| | Providing custody/trust services for reserve assets 为储备资产提供保管/信托服务 | <p>The activity of holding the assets that are “backing” the value of a stablecoin. The entity or entities issuing the stablecoin or other entities may hold the reserve assets 持有“支持”稳定币价值的资产的活动。发行稳定币的实体或其他实体可持有储备资产。</p> |
| Transfer of coins 硬币转让 | Operating the infrastructure 基础设施的运行 | <p>A DLT protocol determining roles in and access to the system. Access may be permissioned (access, including the ability to hold and transfer stablecoins, is controlled with defined access conditions) or permissionless (anyone can access and transfer the stablecoins peer-to-peer, directly to other wallets)</p> <p>确定系统角色和访问权限的 DLT 协议。访问权限可以是有权限的（访问权限，包括持有和转移稳定币的能力，受到规定访问条件的控制），也可以是无权限的（任何人都可以点对点地访问和转移稳定币，直接转移到其他钱包）。</p> |

| | Validating transactions 验证交易 | Mechanism by which a transaction is authorised and validated by validator nodes. 交易由验证器节点授权和验证的机制。 |
|---------------------------------|---|---|
| Interaction with users 与用户互动 | Storing the private keys providing access to stablecoins (wallets) 存储可访问稳定币（钱包）的私人密钥 | Cryptographic wallets storing private and public keys which are used to digitally sign transaction instructions performed by the stablecoin arrangement. Wallets can be custodial (hosted), where a third party operates the wallet and holds the private keys on behalf of the users, or non-custodial (unhosted), where the users hold the private keys directly. Multiple different parties can develop wallets, based on a set of specifications provided by the stablecoin arrangement 存储私人和公共密钥的加密钱包，用于对稳定币安排执行的交易指令进行数字签名。钱包可以是托管的（托管的），由第三方运营钱包并代表用户持有私钥；也可以是非托管的（非托管的），由用户直接持有私钥。多个不同方面都可以开发钱包，基于一套稳定币安排所提供的规格。 |
| | Exchanging, trading, reselling and market making of stablecoins 稳定币的兑换、交易、转售和做市商 | The activity of purchasing/exchanging a stablecoin with fiat currencies, or a stablecoin with other stablecoins or cryptoassets. 用法定货币购买/兑换稳定币，或用其他稳定币或加密资产购买/兑换稳定币的活动。 |

Source: Excerpt from FSB(2020a), Table 1 pp 11-12
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