

# High-level Recommendations for the Regulation, Supervision and Oversight of Global Stablecoin Arrangements

Final report



17 July 2023

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# 1. Introduction

In October 2020, the FSB issued a report with a set of 10 high-level recommendations on the regulation, supervision and oversight of so-called “global stablecoin” (GSC) arrangements (“High-level Recommendations”). The G20 endorsed the High-level Recommendations, and in October 2021 the FSB provided a status update on the progress made on their implementation.

In October 2022, the FSB published a review of its High-level Recommendations, including how any gaps identified could be addressed by existing frameworks, considering recent market and policy developments.<sup>1</sup> This final report takes into account feedback from the public consultation report and stakeholder outreach.

The High-level Recommendations seek to promote consistent and effective regulation, supervision and oversight of GSCs across jurisdictions to address the potential financial stability risks posed by GSCs, both at the domestic and international level, while supporting responsible innovation and providing sufficient flexibility for jurisdictions to implement domestic approaches. The recommendations take a broad approach to global stablecoins and are intended to be flexible so that they can be incorporated into the wide variety of regulatory frameworks potentially applicable to GSCs around the world. International standards designed for specific sectors focus on distinct functions within the remit of the relevant standard setting bodies (SSBs). Where international sectoral standards apply to a GSC for a particular economic function, those standards will address risks specific to the economic function and, as such, authorities should implement those international standards.

There is no universally agreed legal or regulatory definition of stablecoin. The term stablecoin used in this report does not denote a distinct legal or regulatory classification. Importantly, the use of the term “stablecoin” in this report is not intended to affirm or imply that its value is stable. Rather, the term is used because it is commonly employed by market participants and authorities. The FSB’s 2020 report, “Regulation, Supervision and Oversight of ‘Global Stablecoin’ Arrangements” described three characteristics that distinguish a GSC from other crypto-assets and other stablecoins. Those characteristics include: (i) the existence of a stabilisation mechanism<sup>2</sup>, (ii) the usability as a means of payment and/or store of value<sup>3</sup>, and (iii) the potential reach and adoption across multiple jurisdictions. The first two characteristics (the existence of a stabilisation mechanism and usability as a means of payment and/or store of value), and the unique risks that these characteristics pose, distinguish stablecoins from other crypto-assets. The third, the potential reach and adoption across multiple jurisdictions, differentiates GSCs from other stablecoins.

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<sup>1</sup> For more detail on the findings from this review, including the risks posed by GSC arrangements, and how any regulatory gaps identified could be addressed by the revised recommendations and existing frameworks, see Review of the FSB High-level Recommendations of the Regulation, Supervision and Oversight of “Global Stablecoin” Arrangement – Consultative Report (2022)

<sup>2</sup> Recommendation 9 requires GSCs to have an effective stabilisation mechanism. Therefore, so-called algorithmic stablecoins do not meet the High-Level Recommendations for GSCs in particular as they do not use an effective stabilisation method.

<sup>3</sup> To be useable as a means of payment and/or store of value, a stablecoin arrangement typically provides three core functions. These core functions include (i) issuance, redemption and stabilisation of the value of the coins; (ii) transfer of coins; and (iii) interaction with coin users for storing and exchanging coins.

## 2. Objectives and scope and follow up

These High-level Recommendations seek to promote consistent and effective regulation, supervision and oversight of GSCs and stablecoins with the potential to become GSCs across jurisdictions (hereafter, unless otherwise specified, they are collectively referred to as "GSCs") to address the financial stability risks posed, both at the domestic and international level, while supporting responsible innovation and providing sufficient flexibility for jurisdictions to implement domestic approaches. Central bank digital currencies (CBDCs) are not subject to these recommendations.

The recommendations are intended to be flexible so that they can be incorporated into the wide variety of regulatory frameworks potentially applicable to GSCs around the world, and do not displace existing applicable regulatory, supervisory and oversight frameworks. They aim to promote a regulatory, supervisory and oversight environment that is technology neutral and focuses on underlying activities and risks.

The recommendations are addressed to financial regulatory, supervisory and oversight authorities at a jurisdictional level. They should be applied by individual authorities to the extent they fall within the authorities' remits.

Grounded in an assessment of a GSC arrangement's economic functions and the principle of "same activity, same risk, same regulation", and focused on regulatory objectives and outcomes, authorities should apply and, if necessary, develop effective regulatory, supervisory and oversight approaches and cross-border cooperation mechanisms within their respective mandate and legal frameworks.

At the same time, the recommendations set out expectations for providers of services and activities within the GSC arrangements and can serve as a basis for authorities' active engagement with stakeholders on GSC-related risks and how these are addressed.

### 2.1. Scope

The recommendations focus on addressing risks to financial stability and therefore do not comprehensively cover important issues such as anti-money laundering and counter-terrorist financing (AML/CFT), data privacy, cyber security consumer and investor protection, market integrity, competition policy, taxation, monetary policy, monetary sovereignty, currency substitution or other macroeconomic concerns. However, a comprehensive supervisory and regulatory framework for GSC arrangements should effectively address these other issues in addition to financial stability risks.

The recommendations apply to any GSC in any jurisdiction and help authorities to address activities and services within GSC arrangements that may fall outside some jurisdictions' traditional regulatory perimeter. Section 4.4 includes potential elements that could be used to determine whether a stablecoin qualifies as a GSC. Consistent application of these recommendations by all relevant authorities in jurisdictions in which GSC arrangements are active may help ensure comprehensive regulatory coverage and reduce the scope for regulatory arbitrage.

The recommendations establish a global regulatory baseline and some jurisdictions may also decide to take more restrictive regulatory measures.<sup>4</sup> In addition, while focusing on GSCs identified based on this report and the criteria set out in Section 4.4, authorities may choose to apply relevant High-level Recommendations as appropriate to stablecoin arrangements more widely, taking into account the size, complexity and risks of those stablecoins.

The High-level Recommendations complement and are intended to inform any potential updates to international sectoral standards and principles. In particular, they complement the FSB's recommendations for crypto-assets and markets that should apply to any crypto-asset activity that poses financial stability risks, including stablecoins. Authorities should rely on sectoral standards and principles for cross-border cooperation where GSC arrangements perform the same economic function as existing regulated activities covered by those standards. These include, for example, the IOSCO Principles regarding Cross-Border Supervisory Cooperation, the CPMI-IOSCO Principles for Financial Market Infrastructures, including the Responsibilities of Authorities and particularly Responsibility E, the March 2020 IOSCO Report on Global Stablecoin Initiatives, the Financial Action Task Force (FATF) standards, in particular Recommendation 15, and the relevant principles applicable to cross-border banking supervision and crisis management of the Basel Committee on Banking Supervision (BCBS) and the FSB. Efforts by the SSBs to review, and where appropriate adjust, their standards to take into account the novel features of stablecoins can further promote international consistency and reduce the risk of regulatory arbitrage or regulatory underlaps.

## 2.2. Follow-up and review

The FSB, in close cooperation with relevant SSBs, will take the appropriate actions to (i) continue to coordinate international regulatory, supervisory and oversight approaches for global stablecoin arrangements to ensure they are comprehensive, consistent and complementary; and (ii) conduct a review of the implementation of the recommendations by end-2025 that may help determine whether a further review of the recommendations or further action to promote implementation may be necessary.

## 3. Final recommendations

### Recommendation 1: Authorities' readiness to regulate and supervise global stablecoin arrangements

**Authorities should have and utilise the appropriate powers and tools, and adequate resources, to comprehensively regulate, supervise, and oversee a GSC arrangement and its associated functions and activities, and enforce relevant laws and regulations effectively.**

Authorities within a jurisdiction, either independently or collectively, should have and utilise the powers and capabilities to, as applicable, regulate, supervise, oversee and, if necessary or

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<sup>4</sup> For example, jurisdictions could choose to prohibit some or all stablecoin activities.

appropriate, effectively prohibit stablecoin activities being conducted and stablecoin services being offered to users in or from their jurisdiction, consistent with jurisdictions' laws and regulations. This may include, for example, activities and services related to the governance and control of the stablecoin arrangement, operating its infrastructure, issuing and redeeming stablecoins, managing stablecoin reserve assets, providing custody or trust services for those assets, trading and exchanging stablecoins, or storing the keys providing access to stablecoins. Application of an authority's powers to regulate, supervise, and oversee GSC arrangements should be commensurate with their existing or potential size, complexity, risk and/or extent of use as a means of payment and/or store of value.

Authorities should ensure that they are ready to use their powers and capabilities to regulate, supervise and oversee GSC arrangements. Authorities should consider the potential for stablecoins to rapidly scale and become a GSC and should ensure appropriate monitoring of GSC activities and any significant changes to the way those activities are conducted. Authorities should have timely access to relevant information sufficient to conduct effective regulation, supervision and oversight.

Authorities' powers should extend to entities and persons that are engaged in activities of GSCs in their jurisdictions and fall within the scope of their authority and mandate. Authorities should evaluate, identify, and clarify which authorities have responsibility for each activity of a GSC arrangement, as appropriate.

Authorities should identify and address any significant gaps in their regulatory, supervisory and oversight frameworks through changes in regulations, or policy, as appropriate. In some jurisdictions, legislative changes may be necessary or appropriate to address those gaps.

Authorities should have the powers and capabilities to enforce applicable regulatory, supervisory and oversight requirements, including the ability to undertake inspections or examinations, and, when necessary or appropriate, require corrective actions and take enforcement measures. To do so, authorities should be provided with or obtain sufficient information regarding the technology and legal obligations underpinning the GSC arrangements.

Authorities should be able to identify the legal entities or persons responsible for the relevant activities and to assess the ability of the GSC arrangement to implement corrective actions.

Authorities should have the ability to mitigate risks, or prohibit the use of certain or specific stablecoins in their jurisdictions, consistent with jurisdictions' laws and regulations, where these do not meet the applicable regulatory, supervisory, and oversight requirements.

## Recommendation 2: Comprehensive oversight of GSC activities and functions

**Authorities should apply comprehensive and effective regulatory, supervisory and oversight requirements consistent with international standards to GSC arrangements on a functional basis and proportionate to their risks insofar as such requirements are consistent with their respective mandates.**

To promote a technology neutral approach that enables comprehensive oversight of GSC's functions and activities and mitigates regulatory arbitrage, authorities should focus on the functions performed by the GSC arrangement and risks posed and apply the appropriate



regulatory framework, consistent with international standards, in the same manner as they would apply it to entities and persons performing the same functions or activities, and posing the same risks (“same activity, same risk, same regulation”).

This includes the relevant regulation, standards and rules for e-money issuers, remittance companies, financial market infrastructures including payment systems, collective investment schemes, and deposit-taking and/or securities issuance and trading activities. This also includes market integrity, consumer and investor protection arrangements, appropriate safeguards, such as pre- and post-trade transparency obligations, rules on conflicts of interest (including for different service providers such as, the reserve asset custodian, stablecoin trading, lending and borrowing platforms), disclosure requirements, robust systems and controls for platforms where the GSC is traded, rules that allocate responsibility in the event of unauthorised transactions and fraud, and rules governing the irrevocability of a transfer orders (“settlement finality”).

### *Trading platforms and other intermediaries and service providers*

Where a GSC arrangement relies on trading platforms or other intermediaries to perform critical functions, including some or all of its stabilisation function, authorities should require that those intermediaries fall within the regulatory, supervisory and oversight perimeter wherever possible and comply with applicable regulations.

Authorities should also seek to regulate and supervise entities that provide services related to GSCs, including those holding customer assets, such as custody service providers, to address operational, reputational, financial and market protection risks that may arise, including from the safeguarding of customer assets and private keys, and from the other activities that these entities could perform. Regulations and oversight should require the adequate safeguarding of customer assets and private keys, as well as appropriate risk disclosures and adequate protection of the users’ ownership rights, including through prudent segregation and record-keeping requirements that minimise the risk of loss, misuse of or delayed access to assets. In considering appropriate rules and policies, authorities should also consider the proportionate risks that the service providers pose based on the size of and functions performed by the service providers.

### *Review of existing regulatory, supervisory and oversight requirements*

Authorities should assess whether existing regulatory, supervisory and oversight requirements adequately address the risks of GSC functions and activities. Authorities should, if necessary or appropriate, clarify or supplement financial regulations if existing regulations may not adequately capture the risks of GSC functions and activities, and develop and implement regulations or approaches to address uncaptured risks.

## **Recommendation 3: Cross-border cooperation, coordination and information sharing**

**Authorities should cooperate and coordinate with each other, both domestically and internationally, to foster efficient and effective communication, information sharing and consultation in order to support each other in fulfilling their respective mandates and to ensure comprehensive regulation, supervision, and oversight of a GSC arrangement**

**across borders and sectors, and to encourage consistency of regulatory and supervisory outcomes.**

Cooperation arrangements should be flexible, effective, efficient, inclusive, and multi-sectoral, and take into account the complexity and the potential evolution of the GSC arrangement and the risks it poses over time. They may take different forms (e.g. supervisory colleges, fora, networks, memoranda of understanding (MoUs), and ad-hoc arrangements). They should also consider the distinctive nature of GSC arrangements as usually consisting of multiple and oftentimes unrelated entities that interact and have varying roles and responsibilities.

Cooperation arrangements may be underpinned by bilateral and/or multilateral MoUs for cooperation and information sharing, and for crisis management and resolution, and complemented with mechanisms with a single focus, e.g. regarding AML/CFT or cyber security. These arrangements should also consider the potential need to seek cooperation from authorities in other jurisdictions to achieve regulatory objectives, e.g. in implementing recovery and resolution plans, or halting activities based in one jurisdiction having an adverse impact in another.

Authorities should consider a requirement that the arrangement takes into account the interests of each of the jurisdictions and sectors in which the GSC arrangements may be operating or seeking to operate, jurisdictions where the governance body, the providers of the GSC functions and activities and the GSC arrangement's users are located, where (spill over) risks reside, and the potentially differing impacts of GSC arrangements across jurisdictions and between advanced economies (AEs) and emerging market and developing economies (EMDEs).

In establishing cooperation arrangements, authorities should consider to take into account the “Key design considerations for establishing cooperation arrangements for GSCs” set out in Section 4.2.

Cooperation arrangements need to be effective in normal circumstances and should be adequately flexible to facilitate timely and effective management of crises, such as through enhanced cooperation and information sharing about GSC arrangements at times of crisis.

To foster effective cross-border cooperation and coordination, the FSB and SSBs will continue to promote consistency and a common understanding of key elements of regulatory, supervisory and oversight frameworks for GSCs.

## **Recommendation 4: Governance structures and decentralised operations**

**Authorities should require that GSC arrangements have in place and disclose a comprehensive governance framework with clear and direct lines of responsibility and accountability for all functions and activities within the GSC arrangement.**

An adequate governance framework consistent with relevant international standards should be required for the entire network of GSC activities, functions and participants, given each part of the network can affect the other parts. GSC arrangements may vary in the degree of decentralisation of their governance design, but authorities should require that the ownership structure, governance and operation do not impede the effective application of relevant regulations and standards, consistent with the FSB High-level Recommendations. In particular,

authorities should require that GSC issuance be governed and operated by one or more identifiable and responsible legal entities or individuals (“governance body”). The governance structure should allow for timely human intervention, as and when needed or appropriate. Fully permissionless ledgers or similar mechanisms could pose particular challenges to the accountability and governance, and authorities should ensure that appropriate regulatory, supervisory and oversight requirements be effectively applied to such arrangements.

The governance structures and accountabilities should have a sound legal basis and be clear, transparent and disclosed to users, investors and other stakeholders. The governance body of a GSC should disclose how governance and accountability is allocated and how potential conflicts of interest are addressed among different entities within the GSC arrangement and in different jurisdictions, as well as clarify the limits of accountability and legal liability in any one jurisdiction. These disclosures should cover all functions and activities of the GSC arrangement, including but not limited to, setting rules and standards for participants of the arrangement, issuing stablecoins, operating the stabilisation mechanism, in particular the investing of the reserve assets as appropriate, providing the custody or trust services for reserve assets, and providing user-facing services such as exchanges and wallets.

Where a GSC arrangement relies on a third-party, including automated processes and algorithmic protocols (see recommendation 9 regarding the use of algorithmic protocols as a stabilisation mechanism), the GSC governance body should provide a comprehensive assessment and disclosure of how its reliance on the third-party does not impede its ability to meet regulatory requirements and expectations for performance, resilience, security, development and maintenance, and regulatory compliance.

## Recommendation 5: Risk management

**Authorities should require that GSC arrangements have effective risk management frameworks in place that comprehensively address all material risks associated with their functions and activities, especially with regard to operational resilience, cyber security safeguards and AML/CFT measures, as well as “fit and proper” requirements, if applicable, and consistent with jurisdictions’ laws and regulations.**

Authorities should require that GSC arrangements have in place policies that set out how all functions and activities within the GSC arrangement are subject to risk management measures that are appropriate to and commensurate with the specific risks that GSC arrangements may pose. If the risk from the fluctuation in the value of the underlying assets is borne, partially or totally by the GSC operator, the relevant prudential framework (e.g. market risk framework) should be applied to the GSC operator.

Authorities should require that GSC arrangements conduct proper due diligence (for example, by applying “fit and proper” standards, where applicable) into individuals involved in the management and control of the GSC arrangement, as well as those who exercise significant power or discharge significant responsibilities in relation to GSC activities.

Authorities should require that GSC arrangements have in place policies that comprehensively address all material risks associated with their functions and activities, such as operational risks (including fraud and cyber risks), compliance risk (including money laundering/terrorist financing

risks), and provide for appropriate consumer and investor protection, in line with legal obligations in jurisdictions where a GSC arrangement operates. Risk management measures and technical standards should cover relevant activities performed by providers of activities in the GSC arrangements, paying particular attention to compliance by permissionless or anonymous networks. Accordingly, authorities should ensure that GSC arrangements put appropriate AML/CFT measures in place consistent with FATF Standards, including requirements to comply with the FATF "travel rule."

Authorities should require that GSC arrangements conduct continuous risk assessments, contingency preparedness and continuity planning. Authorities should require that GSC arrangements conduct a robust assessment of how their technology model and the rules for transferring stablecoins or relevant assets provide assurance of settlement finality.

In addition to prudential requirements set forth in recommendation 9, authorities should require GSC arrangements to have comprehensive liquidity risk management practices and contingency funding plans that clearly set out the strategies and tools for addressing large number of redemptions i.e. run scenarios, and are regularly tested and operationally robust. The GSC arrangement should also have robust capabilities to measure, monitor and control funding and liquidity risks, including liquidity stress testing.

## Recommendation 6: Data storage and access to data

**Authorities should require that GSC arrangements have in place robust frameworks, including systems and processes for the collecting, storing, safeguarding and timely and accurate reporting of data. Authorities should have access to the data as necessary and appropriate to fulfil their regulatory, supervisory and oversight mandates.**

GSC arrangements should implement and operate data management systems that record and safeguard in a discoverable format relevant data and information collected and produced in the course of their operations, while conforming to all applicable data privacy and other jurisdictional requirements. Adequate controls should be in place to safeguard the integrity and security of both on-chain and off-chain data and conform to applicable data protection regulation.

Authorities should be able to obtain timely and complete access to relevant data and information related to the GSC, wherever the data is located, to enable them to implement adequate regulatory, supervisory and oversight approaches, and recovery and resolution planning activities that capture the functions and activities of the GSC arrangement, in accordance with the level and nature of the risks posed.

## Recommendation 7: Recovery and resolution of the GSC

**Authorities should require that GSC arrangements have appropriate recovery and resolution plans.**

Authorities should require that GSC arrangements have in place appropriate planning to support a recovery, resolution or orderly wind down under the applicable legal (or insolvency) frameworks, including continuity of any critical functions and activities within the GSC arrangement and prevent spillovers to the financial system.

Authorities should consider how such plans are implemented through effective contractual obligations among the entities in the GSC network and address the potential involvement of authorities in all of the jurisdictions in which the entities operate.

## Recommendation 8: Disclosures

**Authorities should require that GSC issuers and, where applicable, other participants in the GSC arrangements provide all users and relevant stakeholders with comprehensive and transparent information to understand the functioning of the GSC arrangement, including with respect to the governance framework, any conflicts of interest and their management, redemption rights, stabilisation mechanism, operations, risk management framework and financial condition.**

Features of GSC arrangements that should be transparent to all users and relevant stakeholders include: the governance structure of the GSC arrangement; the allocation of roles and responsibilities assigned to operators or service providers within the GSC arrangement; the operation of the stabilisation mechanism; the composition of and investment mandate for the reserve assets (see Section 4.3 for common disclosure templates for reserve assets, which may be used by any stablecoin arrangement if there are no specific supervisory disclosure requirements applicable to the GSC); the custody arrangement and applicable segregation of reserve assets; available dispute resolution mechanisms or procedures for seeking redress or lodging complaints, as well as information on risk relevant for users.

Authorities should require that GSC issuers make appropriate disclosures to users and the market regarding the design of the stabilisation mechanism. Disclosures should also include details on the redemption rights of users and the redemption process.

The nature of these disclosures for all of the information (including the disclosure template in Section 4.3) will depend in part on the regulatory framework the issuer is operating under (e.g. whether the issuer is already subject to comprehensive supervision and regulation and disclosure requirements, e.g. as a bank and/or issuer of securities, etc.).

Information to be disclosed to users and relevant stakeholders should include the amount of GSC in circulation and the value and the composition of the assets in the reserve backing the GSC and should be subject to regular independent audits. Other information relevant to the functioning of the GSC arrangement, e.g. a list of available exchange platforms or wallet providers, should be made available on a regular basis, as appropriate.

Authorities should require GSC arrangements to have mechanisms to ensure the protection of the interests of users and counterparties, when a potential modification of the arrangement could have a material effect on the value, stability, or risk of the GSC.

## Recommendation 9: Redemption rights, stabilisation, and prudential requirements

**Authorities should require that GSC arrangements provide a robust legal claim to all users against the issuer and/or underlying reserve assets and guarantee timely redemption. For GSCs referenced to a single fiat currency, redemption should be at par**

**into fiat. To maintain a stable value at all times and mitigate the risks of runs, authorities should require GSC arrangements to have an effective stabilisation mechanism, clear redemption rights and meet prudential requirements.**

### *Redemption rights*

Authorities should require GSC arrangements to provide a robust legal claim and timely redemption to all users over a time period that is consistent with the treatment for other payment and settlement assets.<sup>5</sup> Redemption requests should be processed without undue costs for the user. In particular, the issuer should ensure that GSC users' redemption should not be unduly compromised by the disruption or failure of an intermediary or other relevant entity and infrastructure (e.g. through contractual or operational processes that allow for prompt redemption with the issuer directly in the event of an intermediary becoming unavailable).

The GSC arrangement should also provide adequate information on the process for redemption and the enforcement of GSC users' claims, and regarding how the GSC arrangement ensures smooth execution of the redemption process, including under stressed circumstances. GSC arrangements should not impose conditions that may unduly restrict the ability of GSC users to exercise their redemption rights (e.g. minimum thresholds). Any fees for redemption should be clearly communicated to users and should be proportionate, and not be high enough to become a de facto deterrent to redemption.

### *Stabilisation mechanism*

Authorities should require GSCs to have an effective method to maintain a stable value at all times (a stabilisation method). An effective stabilisation method should include a reserve of assets that is at least equal to the amount of outstanding stablecoins in circulation at all times, unless the GSC issuer (or where applicable, the provider or providers of the issuance, redemption or stabilisation function of the GSC arrangement) is subject to adequate prudential requirements, oversight and safeguards equivalent to BCBS standards and delivers similar levels of protection to commercial bank money. A GSC should not rely on arbitrage activities to maintain a stable value at all times, and it should not derive its value from algorithms. Consequently, so-called algorithmic stablecoins do not meet recommendation 9 as they do not use an effective stabilisation method.

For GSCs that use a reserve-based stabilisation method ("reserve-based stablecoin"), authorities should ensure that there are robust requirements for the composition of reserve assets consisting only of conservative, high quality and highly liquid assets. Authorities should consider limitations to the reserve that would exclude speculative and volatile assets as well as assets where there is insufficient historical evidence and data of quality and liquidity, such as most crypto-assets. Due to the potential risk of fire sales of reserve assets, there should be particular attention to the nature, sufficiency and degree of risk-taking in terms of duration, credit quality, liquidity and concentration of a GSC's reserve assets. Reserve assets should be unencumbered and easily and immediately convertible into fiat currency at little or no loss of

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<sup>5</sup> For stablecoins that are used for payments and are systemic, the PFMI defines timely as "as soon as possible, at a minimum by the end of day and ideally intraday."



value. The market value of reserve assets should meet or exceed the amount of outstanding claims or stablecoins in circulation at all times. In addition, risks of custodial arrangements for reserve assets should also be adequately managed and addressed. In particular, authorities should require reserve-based stablecoins to ensure safe custody and proper record-keeping of reserve assets and that ownership rights of reserve assets are protected at all times, including through segregation requirements from other assets of the GSC, members of its group and the custodian's assets. The reserve assets should be protected against claims of creditors of the GSC issuer, and members of the group of the GSC issuer, in particular in the event of insolvency of the issuer. GSC issuers should also consider the operational, credit and liquidity risks associated with the use of custody service providers to minimise the risk of loss, misuse of or delayed access to the reserve assets.

### *Prudential requirements*

In order to have effective stabilisation methods, GSC arrangements should also be subject to appropriate prudential requirements (including capital and liquidity requirements) to provide that losses can be absorbed and there is sufficient liquidity to deal with outflows. Prudential requirements should take into account the risks of the reserve assets and operational risks (amongst other risks). Adequate capital buffers also contribute to maintaining confidence in the GSC and a stable value at all times. Such capital buffers should be consistent with the size of the GSC in circulation and proportionate to the risks of GSC arrangement.

## **Recommendation 10: Conformance with regulatory, supervisory and oversight requirements before commencing operations**

**Authorities should require that GSC arrangements meet all applicable regulatory, supervisory and oversight requirements of a particular jurisdiction before commencing any operations in that jurisdiction and adapt to new regulatory requirements as necessary and as appropriate.**

Authorities should not permit the operation of a GSC arrangement in their jurisdiction unless the GSC arrangement meets all of their jurisdiction's regulatory, supervisory, and oversight requirements, including affirmative approval (e.g. licenses or registrations) where such a mechanism is in place. That includes requirements specific to crypto-assets as well as those general requirements (including consumer and investor protection regulation) that are applicable to the underlying economic and financial nature of crypto-assets, in line with the principle of "same activity, same risk, same regulation."

Where relevant, GSC arrangements should have the ability to adjust their operational features, processes and mechanisms as necessary or appropriate to maintain compliance with applicable regulatory requirements, consistent with international standards, if these evolve or change.

Before launching the arrangement and the provision of services to users in a particular jurisdiction, entities and individuals involved in the management and control of the GSC arrangement should understand applicable regulatory requirements. Where regulations of more than one jurisdiction may apply, understand which jurisdictions' rules are applicable to different aspects of the functions and activities performed and engage proactively with authorities.

## Annex 1: Key design considerations for cooperation arrangements

There are different possible structures for cross-sectoral and cross-jurisdictional cooperation arrangements. The choice of structure should be tailored to the specific features of the stablecoin arrangement (e.g. risk profile, systemic footprint, level of interest of the relevant authorities). Those features may evolve or change over time, which may lead relevant authorities to consider whether and how the cooperation arrangement should be adapted. The following considerations are intended to inform a suitable structure for an effective cooperation arrangement while allowing for flexibility to accommodate the specificities of GSC.

### Objective

**The authorities that participate in the cooperation arrangement should have a common understanding of the objective of the arrangement.**

The cooperation arrangement could be for information-sharing only or to facilitate coordinated decision-making or supervision on important matters such as authorisation or approval of material design changes, or to support the effective monitoring and enforcement of all applicable regulatory, supervisory and oversight requirements in each authority's jurisdiction, as contemplated in Recommendation 10.

Information-sharing arrangements could be beneficial if the objective of cooperation is to ensure all relevant authorities, on a cross-border and cross-sectoral basis have a common understanding of the functions, structure, operations, and risks of the GSC arrangement. These types of arrangements could be relevant for stablecoins which are not yet systemic but have the potential to become so at some stage in the future. Such structures would enable early involvement of authorities and facilitate decisions later that anticipate systemic potential.

Coordinating decision making could be explored through such cooperation arrangements for larger or more systemic GSCs where cooperation with respect to regulatory and supervisory decisions would be appropriate, and regulatory arbitrage is a key risk. For example, these arrangements could follow the spirit of PFMI Responsibility E which describes how authorities should cooperate with each other, both domestically and internationally, as appropriate and in a flexible manner, in promoting the safety and efficiency of FMI<sup>6</sup>.

### Structure and participation

**Authorities should identify the structure and participation to achieve the stated objective of the cooperation.**

The authorities involved in a cooperation arrangement should be the competent authorities that bear the responsibility for the regulation, supervision, recovery and resolution, and/or oversight of the stablecoin arrangement, as well as the central banks of issue for fiat-referenced GSCs.

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<sup>6</sup> Cooperation arrangements between authorities in no way prejudice the statutory or legal or other powers of each participating authority, nor do these arrangements constrain in any way an authority's powers to fulfil its statutory or legislative mandate or its discretion to act in accordance with those powers.



Other relevant bodies (such as non-financial authorities) could also be involved, for information and consultation purposes. The competent authorities could be the ones responsible for one or more key functions of the GSC arrangements, such as governance, issuance, redemption, stabilisation, and the transfer functions. A cooperation arrangement should provide some flexibility to deal with scenarios where authorities face challenges in identifying competent and relevant authorities. Depending on the jurisdiction and/or type of licensing regime, the competent authorities could be a banking supervisor, securities or market regulator, or FMI/payment supervisor. Competent authorities can involve a combination of such authorities, as is the case already for traditional FMIs such as certain CCPs for example.

The cooperation arrangements could include different categories of membership considering: (i) the role and mandate of relevant authorities, including non-financial regulatory authorities; (ii) criteria to choose members of each category; (iii) considerations for inviting non-financial sector authorities; and (iv) ways to identify competent authorities in case no responsible entity is identified for one or more core function(s) of the GSC arrangement.

The footprint or materiality of the GSC across different jurisdictions, including when a GSC is under development or at an early stage, could impact the relevant authorities of the cooperation arrangement. There may also be differences in the level of activity for each jurisdiction the GSC arrangement operates in, including the possibility that the SC is not systemic in some of the jurisdictions with responsibility for the oversight and supervision of the GSC, while it could be systemically important in other jurisdictions. The membership should also consider the unique foreign exchange and capital account requirements facing emerging market jurisdictions if the GSC were to be widely used as a means of payment.

The possibility that the GSC will evolve or change, including by relocating core functions from one jurisdiction to another, may require a changing of the authorities with oversight and supervisory responsibilities. Given the ease with which GSC arrangements may change location of key functions, a cooperation arrangement should account for such a process in order to avoid any gaps in this respect.

## Confidentiality and legal constraints

It is important that cross-jurisdictional cooperation is underpinned by effective information-sharing gateways and confidentiality and other safeguards to facilitate the exchange of information across borders and collective or combined risk assessment among the relevant supervisory and regulatory authorities. Information-sharing gateways and confidentiality and other safeguards could be established through the development and use of a multilateral information-sharing arrangement among authorities. Such arrangement could be informed by existing international standards and guidance, including the PFMI Responsibility E and the 2010 IOSCO Principles Regarding Cross-Border Supervisory Cooperation. Alternatively, members of the cooperation arrangement may rely on bilateral information-sharing arrangements between authorities. To the extent that the stablecoin activities fall within the existing regulatory perimeter authorities may be able to rely on existing information-sharing arrangements, which may not extend to other sectoral authorities or non-financial authorities but could be adapted to their needs.

## Annex 2: Template for common disclosure of reserve assets

This template is designed as a common disclosure template for reserve-backed GSCs. This template is meant as a model for authorities seeking to supplement existing disclosure requirements or adopt new disclosure requirements. A common disclosure framework on the composition of and investment mandate for the reserve assets would help market participants consistently assess and compare the quality of the reserve portfolio and the GSC arrangement's ability to maintain redemption at par at all times. The template should not be interpreted as endorsing the inclusion of particular asset classes in the reserve portfolio, but only as illustrating the level of detail in which assets should be disclosed to users, investors and other stakeholders.

In addition to the categories listed below, the following should apply to all eligible assets included in the disclosure of reserve assets:

- Eligible assets must be unencumbered, meaning the assets are free of legal, regulatory, contractual, or other restrictions on the ability of the GSC arrangements to liquidate, sell, transfer, or assign the asset.
- Eligible assets should exclude unencumbered assets which the GSC arrangements does not have the operational capability to monetise to meet redemptions, including during periods of stress.
- Eligible assets should be under the control of the function charged with managing the reserve assets, meaning the function has the continuous authority, and legal and operational capability, to monetise any asset in the reserve.

GSC arrangements should report both the market value as of the reporting period as well as the daily average over the most recent quarter. The daily average should be presented as the simple average of daily observations.

	<b>Illustrative asset categories<sup>7</sup></b>	<b>Market value at month end</b>	<b>Weighted average maturity</b>	<b>Market Value (daily average over month-end)</b>
1	Demand deposits at commercial banks			
2	Term deposits at commercial banks			
3	Money market fund shares			
4	Reverse repo (collateralized by government bills, bonds, or notes)			
5	Government bills			
6	Government bonds and notes			

<sup>7</sup> These asset categories are for illustrative purposes only. Relevant asset categories should be conservative, high quality, and highly liquid, consistent with the requirements in recommendation 9 and for reserve assets in each jurisdiction.

Illustrative asset categories <sup>7</sup>		Market value at month end	Weighted average maturity	Market Value (daily average over month-end)
...	[...]			
7	Other assets <sup>8</sup>			
8	Of which, loans or extensions of credit to entities affiliated with the GSC			
9	Total assets of reserve portfolio			
10	Total stablecoins in circulation			

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<sup>8</sup> Other assets should include information that is relevant for assessing and evaluating the quality of those assets, including for example the asset class, issuer, credit rating and maturity of each instrument.

## Annex 3: Potential elements that could be used to determine whether a stablecoin qualifies as a GSC

A stablecoin's global systemic importance could be measured in terms of the impact that a stablecoin arrangement's financial or operational disruptions, or failure, can have on crypto-asset markets, the global financial system and the wider economy.

Given that a stablecoin may be used as a means of payment or store of value, and could be used in multiple jurisdictions, the criteria to be considered in determining whether a stablecoin qualifies as a GSC should take into account the potential uses in multiple jurisdictions.

The potential elements set out below that could be used to determine whether a stablecoin qualifies as a GSC build on the criteria that are often considered in determining the need for or degree of regulation, supervision, and oversight of FMIs (PFMI, 2012, also supplemented by guidance on the Application of the PFMI to stablecoin arrangements, issued in 2022), and global systemically important banks (BCBS, 2013). They include factors and considerations for authorities to determine whether a stablecoin has the potential to expand reach and adoption across multiple jurisdictions and has the potential to achieve substantial volume. Such potential elements are:

- Number and type of stablecoin users
- Number and value of transactions
- Size of reserve assets
- Value of stablecoins in circulation
- Market share in cross-border use in payments and remittances
- Number of jurisdictions with stablecoin users
- Market share in payments in each jurisdiction
- Redemption linked to a foreign currency or multiple currencies
- Interconnectedness with financial institutions and the broader economy,
- Interconnectedness with the wider crypto-assets ecosystem, other crypto-asset services and decentralised finance
- Integration with digital services or platforms (e.g. social networks, messaging applications)
- Available alternatives to using the GSC as a means of payment at short notice
- Business, structural and operational complexity

## Glossary<sup>9</sup>

### **Algorithmic stablecoin**

A stablecoin that purports to maintain a stable value via protocols that provide for the increase or decrease of the supply of the stablecoin in response to changes in demand.

### **Blockchain**

A form of distributed ledger in which details of transactions are held in the ledger in the form of blocks of information. A block of new information is appended to the chain of pre-existing blocks via a computerised process by which transactions are validated.

### **Crypto-asset**

A digital asset (issued by the private sector) that depends primarily on cryptography and distributed ledger or similar technology.

### **Crypto-asset ecosystem**

The entire ecosystem that encompasses all crypto-asset activities, market and participants.

### **Crypto-asset issuer**

An entity, person, or other structure that creates new crypto-assets.

### **Crypto-asset market**

Any place or system that provides buyers and sellers the means to trade crypto-assets and the associated instruments, including lending, structured investment products, and derivatives. Crypto-asset markets facilitate the interaction between those who wish to offer and sell and those who wish to invest.

### **Crypto-asset services**

Services relating to crypto-assets that may include, but are not limited to, distribution, placement, facilitating exchange between crypto-assets or against fiat currencies, custody, provisioning of non-custodial wallets, facilitating crypto-asset trading, borrowing or lending, and acting as a broker-dealer or investment adviser.

### **Crypto-asset service providers**

Individuals and entities that provide crypto-asset services.

### **Crypto-asset activities**

Activities serviced by a crypto-asset issuer or crypto-asset service provider.

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<sup>9</sup> The glossary is for the purposes of this document and does not replace other existing taxonomies

## **Crypto-asset trading platform**

Any platform where crypto-assets can be bought and sold, regardless of the platform's legal status.

## **Decentralised Finance (DeFi)**

A set of alternative financial markets, products and systems that operate using crypto-assets and “smart contracts” (software) built using distributed ledger or similar technology.

## **DeFi protocols**

A specialized autonomous system of rules that creates a program designed to perform financial functions.

## **Digital asset**

A digital representation of value or contractual rights which can be used for payment or investment purposes.

## **Fiat-referenced stablecoin**

A stablecoin that aims to maintain a stable value with reference to one or several fiat currencies and has the potential to be used as a means of payment and/or store of value.

## **Global stablecoin (GSC)**

A stablecoin with an existing or potential reach and use across multiple jurisdictions and which could become systemically important in and across one or many jurisdictions, including as a means of making payments and/or store of value.

## **Reserve-based stablecoin**

A stablecoin that aims to maintain a stable value with a dedicated pool of reserve assets.

## **Smart contract**

Code deployed in a distributed ledger technology environment that is self-executing and can be used to automate the performance of agreement between entities. The execution of a smart contract is triggered when that smart contract is “called” by a transaction on the blockchain. If triggered, the smart contract will be executed through the blockchain’s network of computers and will produce a change in the blockchain’s “state” (for example, ownership of a crypto-asset will transfer between market participants).<sup>10</sup>

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<sup>10</sup> There are unresolved questions regarding the legal status and enforceability of smart contracts.

## **Stablecoin**

A crypto-asset that aims to maintain a stable value relative to a specified asset, or a pool or basket of assets.

### **Stablecoin arrangement**

An arrangement that combines a range of functions (and related activities) that aims to maintain a stable value relative to a specified asset, or a pool or basket of assets. When discussing a stablecoin arrangement, reference is made to:

- **Activity**

Typical activities in a stablecoin arrangement are: (i) establishing rules governing the stablecoin arrangement; (ii) issuing, creating and destroying stablecoins; (iii) managing reserve assets; (iv) providing custody/trust services for reserve assets; (v) operating the infrastructure; (vi) validating transactions; (vii) storing the private keys providing access to stablecoins (e.g. using a wallet); and (viii) exchanging, trading, reselling, and market making of stablecoins.

- **Function**

Functions in a stablecoin arrangement are: (i) governing the arrangement; (ii) issuance, redemption and stabilisation of the value of coins; (iii) transfer of coins; and (iv) interaction with users for storing and exchanging coins.

- **Governance body**

A body responsible for establishing and monitoring the rules governing the stablecoin arrangement which would cover, among other issues, the types of entities that could be involved in the arrangement, the protocol for validating transactions, and the manner in which the stablecoin is “stabilised”.

- **Provider of function/activity**

An entity that provides a particular function or activity associated with that function in a stablecoin arrangement.

- **User**

A person or entity that uses a stablecoin, e.g. for speculative trading, lending, borrowing, or as a means of payment or store of value.

- **Validator node**

An entity that participates in the consensus mechanism in a distributed ledger or similar network. In the context of distributed ledger technology, a validator node will commit transaction blocks to the ledger once they are validated.

**Wallet**

An application or device for storing the cryptographic keys providing access to crypto-assets. A hot wallet is connected to the internet and usually takes the form of software for the user, while a cold wallet is a hardware that is not connected to the internet and stores the cryptographic keys.

**Custodial wallet**

A service in which crypto-assets are held by a service provider. A user interacts with the service provider to manage the user's crypto-assets. A custodial wallet is also known as a "hosted wallet".

**Non-custodial wallet**

Software or hardware that stores cryptographic keys for a user, making the user's crypto-assets accessible only to the user, and allowing the user to interact directly with the blockchain and the blockchain-based finance applications. A non-custodial wallet is also known as an "unhosted wallet".