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Regulating Stablecoins: Moving Beyond Reserve Fundamentals to Market Plumbing

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Moving Beyond Reserve Fundamentals to Market Plumbing

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Abstract

This report argues that reserve-centric oversight is not sufficient for recipient jurisdictions. Most local users do not exit through direct issuer redemption. They exit through secondary market trading and banking or payment channels, where retail convertibility is shaped in practice. The report shows how retail convertibility can weaken when stress impairs par transmission or fiat cash-out, even if reserves appear sound and the primary market anchor remains intact. It develops a two-stage framework for retail convertibility, maps the main frictions to corresponding policy measures, and shows how those measures can be applied through enforceable onshore touchpoints. It then applies that framework to the ASEAN+3, where offshore foreign currency (FCY) stablecoins are the immediate policy issue and where future local currency (LCY) arrangements may require different calibration depending on domestic policy objectives.

JEL classification: E42, F33, G28

Keywords: Fiat-backed stablecoins; retail convertibility; arbitrage; two-layered market structure; payment rails

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Abbreviations

AML/CFT	Anti-Money Laundering and Countering the Financing of Terrorism
AP	Authorized Participant
CEX	Centralized Exchange
CPMI	Committee on Payments and Market Infrastructures
CU	Creation Unit
ESMA	European Securities and Markets Authority
ETF	Exchange-Traded Fund
EU	European Union
FATF	Financial Action Task Force
GENIUS Act	Guiding and Establishing National Innovation for U.S. Stablecoins Act
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
MiCA	Markets in Crypto-Assets Regulation
NAV	Net Asset Value
SVB	Silicon Valley Bank
USDC	USD Coin
USDe	Ethena USDe
USDT	Tether USD

Glossary

Attrition	The reduction in value between the expected fiat amount and the amount actually received, including through fees, deductions, spreads, or other route-level frictions.
Convertibility	The practical ability of a holder to obtain fiat value from a stablecoin through the routes actually available to that holder. Convertibility therefore depends not only on legal entitlement but also on route-level liquidity and operational capacity.
Eligible redeemer	A person or entity contractually permitted to create or redeem stablecoins directly with the issuer in the primary market.
Off-chain fiat rail	The banking or payment system infrastructure through which fiat funds are transferred or settled.
On-chain stablecoin rail	The blockchain-based transfer infrastructure on which stablecoins are transferred and settled.
Par anchor	The primary market reference point created by issuer-side redemption into the reference fiat currency at or near par under stated terms.
Payout corridor	The operational route through which fiat cash-out is completed after stablecoins are sold or redeemed. It includes the relevant banking or payment intermediaries, access points, and the off-chain fiat rail used to deliver fiat funds to the user.
Primary market	The issuance and redemption market between the issuer and eligible redeemers.
Redeemability	The contractual ability of an eligible redeemer to require the issuer to redeem the stablecoin into the reference fiat currency under stated terms.
Secondary market	The market in which stablecoins trade among a wider set of holders, typically through centralized exchanges (CEXs) and other intermediated venues.
Time-to-cash	The elapsed time between the holder’s initiation of cash-out and the point at which usable fiat funds are received.

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I. Introduction

1 **Stablecoins[2] have become a material policy issue in many jurisdictions.** What began as an instrument used mainly within crypto markets now has broader policy relevance because usage has expanded rapidly, including in Asia and the Pacific.[3] At the same time, actual use, holdings, and circulation remain concentrated in foreign currency (FCY) stablecoins, in practice overwhelmingly U.S. dollar-linked instruments. In many economies, stablecoins are no longer a peripheral innovation. They are a growing cross-border channel through which offshore monetary instruments can reach domestic users (IMF 2025).

2 **Meanwhile, some jurisdictions in the region are exploring local currency (LCY) stablecoins or closely related LCY-based tokenized payment instruments.[4]** Their current scale may still be limited, and the legal forms under consideration are not always identical across jurisdictions. Even so, an emerging policy asymmetry is already visible. Authorities may seek to limit the domestic footprint of offshore FCY stablecoins while enabling selected LCY digital payment instruments to develop within the domestic monetary and payments system.

3 **For recipient jurisdictions,[5] the policy problem is therefore two-sided.** On one side, those jurisdictions may wish to contain the risks that FCY stablecoins can pose to monetary sovereignty, capital flow management, payment system integrity, and financial stability. On the other side, those same jurisdictions may see value in allowing LCY-based digital payment instruments to develop within the regulatory perimeter if they can support payment innovation without undermining domestic policy objectives. The policy question is not whether all stablecoins should be treated alike. It is whether the conditions under which stablecoins are converted and cashed out can be calibrated differently in line with domestic policy objectives.

4 **That two-sided policy problem cannot be addressed through issuer-side safeguards alone.** Existing regulatory debate has focused mainly on reserves, custody, and redemption terms. Those safeguards are necessary. In many recipient jurisdictions, however, direct regulation of issuers may be difficult in practice because the main issuers often remain offshore. Issuer-side safeguards also do not by themselves determine *retail convertibility*. For many users in recipient jurisdictions, the relevant question is whether a stablecoin can in fact be sold, converted, and cashed out into fiat money in a sufficiently predictable manner. Reserve-centric oversight is therefore necessary, but not sufficient on its own.

5 **This report takes retail convertibility as its common analytical focus.** In this report, retail convertibility means the practical ability of a user to sell a stablecoin, convert it into fiat, and obtain usable fiat funds with predictable conversion attrition and time-to-cash. The report

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[2] Unless otherwise stated, "stablecoins" in this report refer to fiat-backed stablecoins designed to maintain a stable value against one or more specified fiat currencies and backed by reserve assets, with redemption into the reference fiat currency at (or near) par under specified terms.

[3] Evidence points to rising stablecoin use in Asia and the Pacific (APAC). IMF (2025) notes that APAC recorded the highest volume of stablecoin activity globally. Chainalysis (2025) reports that APAC was the fastest-growing region for on-chain crypto activity in the 12 months ending June 2025, with value received rising 69 percent y-o-y from USD1.4 trillion to USD2.36 trillion.

[4] Jurisdictional approaches differ in the ASEAN+3 region. Hong Kong's Stablecoins Ordinance created a licensing regime for fiat-referenced stablecoin issuers. Indonesia is advancing the Digital Rupiah under Project Garuda as a state-led digital rupiah initiative aimed at preserving the sovereignty of the Rupiah in the digital era. Malaysia is exploring ringgit stablecoins and tokenized deposits through its Digital Asset Innovation Hub.

[5] In this report, "recipient jurisdictions" refers to economies where stablecoins mainly enter as offshore-issued instruments used by domestic holders, rather than as domestically issued monetary instruments.

does not revisit issuer-side reserve assets in detail. It also does not attempt to cover every aspect of the broader stablecoin arrangement that can shape retail convertibility, including cross-chain mechanisms and foreign exchange conversion channels. Instead, it focuses on the channels through which par is transmitted and fiat cash-out is completed for local users, and on how recipient jurisdictions in the ASEAN+3 can calibrate those convertibility conditions in line with domestic policy objectives.

6 **The rest of the report proceeds as follows.** Section II sets out the structure of retail convertibility, distinguishing convertibility from redeemability. Section III examines where that mechanism can weaken. Section IV considers how authorities can strengthen, condition, or limit relevant convertibility conditions depending on the policy objective. Section V applies that framework to enforceable onshore touchpoints in the ASEAN+3. Section VI concludes.

II. Retail Convertibility: Structure and Transmission Mechanism

A. Redeemability, Convertibility, and Market Structure

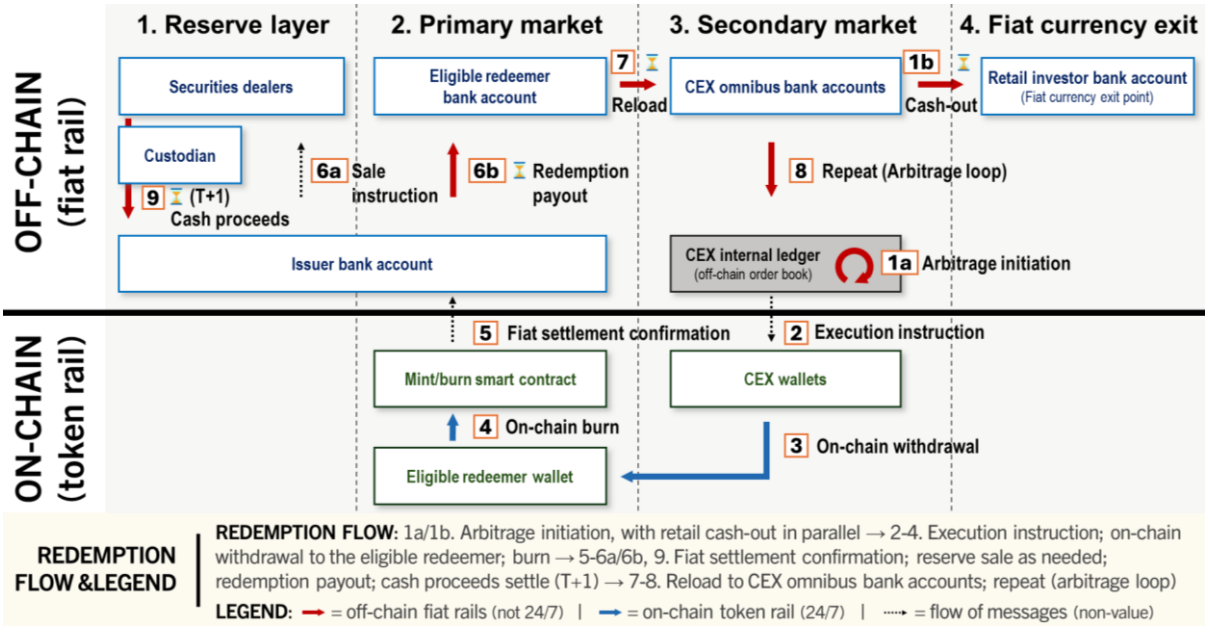
7 **Redeemability and convertibility are related, but they are not the same.** Redeemability refers to issuer-side access in the primary market: the contractual ability of an eligible redeemer—a person or entity with direct issuer access—to require the issuer to redeem the stablecoin into the reference fiat currency under the stated terms. Convertibility is broader. It refers to the practical ability of a holder to obtain fiat value and complete cash-out through the routes actually available to that holder. This distinction matters because redeemability and convertibility attach to different parts of the stablecoin arrangement.

8 **That distinction follows from the two-layered market structure of stablecoins.** The primary market is the issuance and redemption market between the issuer and a limited set of eligible redeemers. The secondary market is where the wider user base trades, typically through centralized exchanges (CEXs) and other intermediated venues. *Par redeemability belongs to the primary market.* It serves as the contractual anchor of the arrangement. Market practice illustrates the point: in the terms of USDC and USDT, Circle Mint account holders and verified customers, respectively, function as the eligible redeemers with direct issuer access, rather than all holders.[6] But most retail users are not direct counterparties of the issuer. For them, issuer-side redemption terms do not automatically translate into a direct claim on the issuer at par.

9 **In the secondary market, by contrast, near-par pricing is transmitted rather than directly promised.** That near-par outcome is transmitted from the primary market by eligible redeemers rather than contractually guaranteed. When a stablecoin trades above or below par in the secondary market, eligible redeemers may have an incentive to arbitrage the deviation by creating or redeeming against the issuer and trading in the market. Near-par trading in the secondary market is therefore largely the outcome of a transmission mechanism in which primary market access, arbitrage incentives, and the practical ability to execute the arbitrage trade across the primary and secondary markets all matter (Figure 1, see Annex 1 for details).

[6] Under Circle's terms, direct USDC redemption is available only to holders with a Circle Mint account; holders without such an account cannot redeem with Circle unless and until they become eligible to open one and maintain it in good standing. Tether's terms are similar in effect: only verified customers can request USDT issuance or redemption. Circle Internet Financial, LLC (2025); Circle Internet Financial, LLC (2026); Tether Operations, S.A. de C.V. (2025).

Figure 1. Transmission from Primary Market Par to Secondary Market Near-Par Pricing



Source: Author.

10 Secondary market execution, however, is still not the end of the story. For most users, conversion is not complete when the stablecoin is sold and a fiat balance appears on a trading venue.[7] What matters is whether the fiat funds can be delivered in usable forms through bank or payment account credit. That final step depends on the payout corridor through which fiat cash-out is completed, including the relevant banking or payment intermediaries and the off-chain fiat rail they use. Retail convertibility is therefore the joint result of secondary market execution and payout completion. Time-to-cash and attrition are both relevant at this stage, including through fees, deductions, or other route-level frictions.

B. Implications for Policy Design

11 For recipient jurisdictions, the practically relevant policy object is retail convertibility. Issuer-side terms remain important because they define the primary market anchor. But many domestic users, especially where major instruments are offshore-issued FCY stablecoins, encounter the arrangement through secondary market sale. For those users, issuer-side redemption terms alone do not determine the domestic outcome. Even where legal frameworks provide broader redemption rights for holders, retail users may still exit mainly through secondary market sale and payout corridors.[8] Retail convertibility therefore remains the more practical policy object.

12 Retail convertibility is formed through two linked transmission stages.

[7] Stablecoin-linked card and payment uses are expanding and may reduce demand for fiat cash-out at the margin. This report does not focus on those use cases. It focuses on settings where users ultimately seek fiat payout.

[8] For example, under the European Union (EU)'s Markets in Crypto-assets Regulation (MiCA), holders of e-money tokens have a right of redemption at any time and at par value. Singapore's stablecoin framework similarly requires issuers of regulated single-currency stablecoins to provide holders with a direct legal claim for redemption at par within five business days of a redemption request. In other jurisdictions, including the United States, which remains central to the current stablecoin market, the position remains less settled. Cadwalader, Wickersham & Taft (2025); Regulation (EU) 2023/1114; United States (2025).

- **Stage 1** runs from the primary market to the secondary market. The issuer's par anchor in the primary market is transmitted into near-par secondary market pricing through arbitrage.

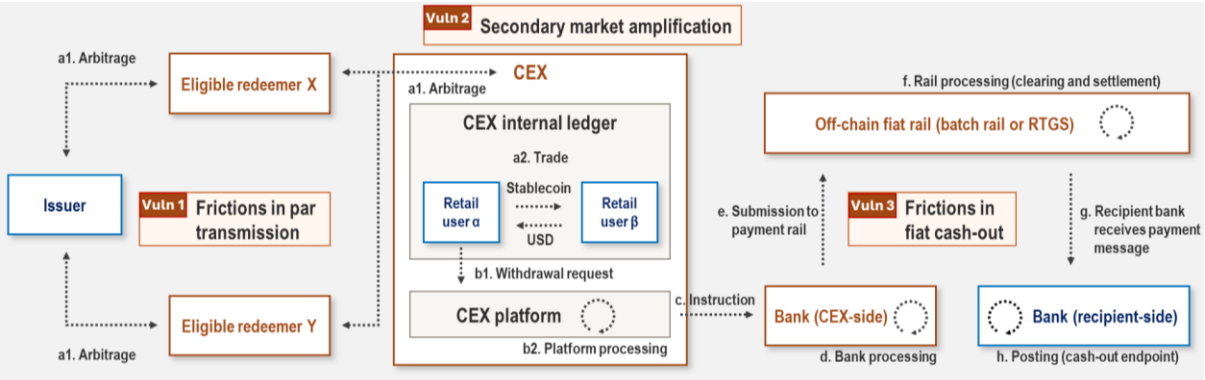
- **Stage 2** runs from the secondary market to fiat cash-out. Proceeds from the sale of stablecoins must move through a payout corridor and reach the user in usable fiat form through a sufficiently reliable route.

This two-stage structure provides the analytical map for the rest of the report. Although presented separately for analytical clarity, the two can interact, especially under stress: secondary market dislocations can intensify sell-and-convert pressure, while weaker payout conditions can impair arbitrage and par transmission. Section III examines where each stage can weaken in practice and how those weaknesses can reinforce one another.

III. Where Retail Convertibility Frays: Key Vulnerabilities

13 **Section III examines the main frictions that can weaken retail convertibility in practice.** The discussion follows the two-stage structure set out in Section II. It first considers frictions that weaken the transmission of the par anchor from the primary market to the secondary market. It then turns to frictions that can impair fiat cash-out after a secondary market sale (Figure 2, see Annex 2 for details).

Figure 2. Retail Convertibility: Transaction Flow and Key Vulnerabilities



Source: Author.

A. Stage 1: Frictions in Par Transmission to the Secondary Market

1. Segmented Redeemability and Concentrated Arbitrage Capacity

14 **Segmented redeemability can become a fault line under stress.** Only eligible redeemers can access the issuer directly, while most users must exit through the secondary market. When selling pressure comes mainly from secondary market users without direct issuer access, discounts can emerge in the secondary market even if primary market redemption remains available at par.

15 **Re-anchoring often depends on a small group of actors executing the arbitrage trade across the primary and secondary markets.** When the secondary market price falls below par, eligible redeemers can acquire discounted stablecoins, redeem them at par in the primary market, and recycle fiat back into the secondary market (Du et al. 2025). Under stress, segmented redeemability therefore becomes an exit hierarchy. Participants closest to the issuer can typically redeem at par, while users without that access may face wider discounts, longer time-to-cash, or greater attrition, depending on the effectiveness of the arbitrage response (Box A).

16 **In practice, this exit hierarchy is often opaque and concentrated.** Tiered access is not unique to stablecoins, but the governance is different. In ETFs, for example, primary market access is also limited to authorized participants (APs), but those functions sit within a more integrated and supervised securities framework (Annex 3).[9] In many stablecoin arrangements, by contrast, eligibility is determined through private onboarding, and the identity and concentration of effective arbitrage capacity are not transparent to the broader market. Empirical evidence also suggests high concentration. On Ethereum, the average number of redeeming arbitrageurs per month has been estimated at about 6 for USDT and about 521 for USDC (Ma et al. 2025).[10]

17 **This vulnerability turns on willingness to act, not only ability to act.** Even when eligible redeemers can execute the arbitrage, they may still choose to scale back arbitrage for discretionary reasons, including balance-sheet, liquidity, or risk-management constraints. In concentrated structures, secondary market prices can therefore depend heavily on the choices of a small set of eligible redeemers. The concern is not collusion per se. It is that opaque and concentrated arbitrage capacity can allow discounts from par to widen and persist even when par redemption remains available.[11]

2. Secondary Market Microstructure

18 **Secondary market microstructure can further weaken near-par pricing in the secondary market.** Users typically exit on the venues they can actually access, and their outcomes depend on the prices available there. Secondary market dislocations can therefore worsen retail convertibility directly, even when issuer-side redemption remains unchanged. Two sources of vulnerability in the secondary market are especially important:

- **Fragmented liquidity.** Stablecoin trading spans multiple trading venues, but lacks the market-wide arrangements that help align prices across them, as in major equity markets.[12] When selling pressure concentrates on one venue, liquidity cannot always

[9] ETFs illustrate the governance difference. ETF primary market access is also segmented, yet APs operate within a securities regulatory framework that more clearly defines intermediary roles, trading conduct, clearing and settlement arrangements, and disclosure standards.

[10] Ma et al. (2025) identify primary market arbitrageurs as addresses transacting directly with issuer treasury wallets on Ethereum. In their sample, USDT has about 6 redeeming arbitrageurs in an average month, with the largest accounting for about 66% of redemption activity, while USDC has about 521 redeeming arbitrageurs in an average month, with the top 1 and top 5 accounting for about 45% and 85% of redemption activity, respectively.

[11] The proposition that secondary market anchoring can become sensitive to intermediaries' discretionary intermediation decisions is consistent with evidence that stablecoin arbitrage is permissioned and can be concentrated, and with analysis highlighting how limited direct redemption access can amplify market stress. Allen et al. (2024); IMF (2025); Ma et al. (2025).

[12] Equity trading is also fragmented across exchanges and other trading venues. Prices nonetheless tend to align more closely across venues because mechanisms supporting consolidated price discovery and best execution are more developed. Examples include broker best execution obligations and trade through protections, such as the Order Protection Rule under Regulation NMS in the United States. IOSCO (2022); U.S. SEC (2022, 2024).

be reallocated fast enough from other venues or networks (Allen et al. 2024, Kaiko 2025). Local discounts can then widen, especially when compliance checks or custody transfers delay the movement of inventory or collateral (Box B).[13]

- **Leverage and forced selling.** This channel is especially relevant because some stablecoins function widely as quote currencies, margin collateral, and settlement assets in crypto markets. Exceptionally high leverage—including leverage above 100x on major CEXs—is available in crypto derivatives trading, so sharp moves in broader cryptoasset prices can trigger sizable one-sided stablecoin flows even when issuer-side redeemability remains unchanged. Stablecoins also account for a large share of margin collateral in these markets,[14] which can further amplify one-sided flows and deepen secondary market discounts when liquidity is thin. Venue-level liquidation rules, reference prices, and order book depth can then materially affect the scale and persistence of those discounts.

19 **These secondary market frictions can interact with segmented redeemability.** If only a narrow set of actors can arbitrage and venue-level selling pressure accelerates before they respond, discounts can widen further and persist longer.

B. Stage 2: Frictions in Fiat Cash-out

20 **Retail convertibility can also weaken at the payout stage.** A user may be able to sell a stablecoin in the secondary market, but fiat cash-out still depends on the payout corridor. The core structural friction is that crypto trading and stablecoin transfers can continue around the clock, while fiat cash-out through the payout corridor is constrained by operating windows, cut-offs, and intermediary processing limits.[15] Three sources of weakness are especially important:

- **Limited payout availability relative to 24/7 crypto markets.** Fiat cash-out depends on off-chain fiat rails and related intermediaries that operate with business day calendars, cut-offs, maintenance windows, and throughput constraints. When payout cannot be completed on the timetable users expect, time-to-cash lengthens precisely when demand for exit may be rising.

- **Concentrated banking access.** In many stablecoin arrangements, only a small set of banks[16] support fiat cash-out flows for issuers and exchanges, reflecting limits in operational capacity and compliance capabilities. If a key banking access point is impaired, fiat cash-out capacity can shrink sharply (Aronoff et al. 2026, IMF 2025). In some jurisdictions, supervisory expectations for banks' crypto-related activities may further narrow the set of willing counterparties, increasing concentration risk.[17]

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[13] "Moving inventory" refers to shifting stablecoin balances between self-custodied wallets and exchange accounts, and blockchain networks used for trading and settlement. Such transfers may require operational processing, custody movement, and, where on-chain, transaction confirmation before the inventory becomes usable on the destination venue. Under stress, these steps can be delayed, throttled, or paused. IOSCO (2023); Kaiko (2024).

[14] As of early October 2025, stablecoins together with USD cash accounted for about 78 percent of Bitcoin futures margin collateral. Fasanara Digital and Glassnode (2025).

[15] Upstream market plumbing can also affect time-to-cash predictability. This report focuses on downstream cash-out frictions, since upstream channels for the major fiat-backed stablecoins are often U.S.-centric in practice (see Annex 4).

[16] Public disclosures provide only partial visibility into the number and identity of banking access points. Circle discloses some custody and banking relationships, but access points can change over time; Tether's public disclosure is more limited, so this report does not assert a fixed count. Aronoff et al. (2026); Circle (2023); S&P Global Ratings (2023).

[17] Bank supervisors in some major jurisdictions have issued supervisory statements, notification processes, and related

- **Operational processing within the payout corridor.** In normal conditions, compliance screening, transaction monitoring, and payout workflows are largely automated. Under stress, however, alerts or capacity limits can trigger exception handling and manual review, leading to information requests, queueing, or temporary holds as redemption and withdrawal volumes rise.[18] Time-to-cash and attrition can therefore worsen even after a secondary market sale has been completed.

21 **The common issue is the predictability of fiat cash-out, not token transfer as such.** Limited payout availability, concentrated banking access, and operational gates can each slow or block the payout corridor through which secondary market users obtain usable fiat funds. When that corridor becomes less predictable, retail convertibility weakens. Section IV turns to how authorities can respond to these frictions at enforceable touchpoints.

IV. Policy Framework for Calibrating Retail Convertibility Conditions

A. Calibration Measures

22 **Section IV sets out a policy framework for addressing the frictions identified in Section III.** The policy objective is not to apply a single convertibility stance across all instruments. It is to calibrate the regulatory intensity applied to retail convertibility conditions across instruments in line with domestic policy objectives, whether to strengthen, condition, or limit those conditions in practice.

23 **Existing international standards and domestic frameworks already provide a meaningful baseline for issuer-side frameworks.** Coverage is relatively more developed with respect to reserves, custody, and governance. The coverage becomes thinner, however, on the operational conditions that determine whether primary market par is transmitted into secondary market outcomes and whether secondary market holders can complete fiat cash-out through a predictable payout corridor. The framework set out in this Section focuses on those less specified areas (Table 1).

Table 1. Mapping Vulnerabilities to Policy Measures

Section III Vulnerability	Rules Less Specified	Section IV Policy Directions
Segmented redeemability and concentrated arbitrage capacity	Eligible redeemer conditions; arbitrage concentration; access-linked obligations	Minimum conditions on eligible redeemers
Secondary market amplification	Leverage; liquidation; trading-layer amplification	Controls on secondary market amplification
Fiat cash-out frictions through the payout corridor	Accountable cash-out party; payout concentration; contingency arrangements	Clarification of responsible party; rules on concentration and contingency

Source: Author.

expectations for banks' cryptoasset and dollar token activities, which can raise compliance costs and may limit bank participation. Federal Deposit Insurance Corporation (FDIC) (2022, 2025); Board of Governors of the Federal Reserve System (2025).

[18] The FATF's risk-based AML/CFT framework for VASPs requires customer due diligence and ongoing monitoring; alert-based controls can trigger exception handling and manual review when information is incomplete, slowing payouts at high volumes. Separately, Binance.US announced a halt in U.S. dollar deposits and a pause in fiat withdrawal channels in June 2023 amid banking partner actions. Financial Action Task Force (FATF) (2021); Reuters (2023).

Stage 1: Measures for Par Transmission to the Secondary Market

24 The first policy task is to calibrate the conditions under which the primary market par is transmitted into the secondary market. The objective is to reduce avoidable frictions in par transmission and to ensure that domestic facilitation does not rest on opaque or weakly governed arbitrage arrangements. Two elements are central:

- **Minimum conditions on eligible redeemers.** Eligible redeemers receive privileged primary market access, and their arbitrage activity can materially affect retail convertibility conditions in the secondary market. That privileged access warrants corresponding baseline obligations. Access-and-obligation designs of this kind are already used in other areas of finance, including market making and primary dealer frameworks.[19] Authorities should therefore set baseline eligibility expectations and require issuers to condition eligible redeemer access on the capacity to execute arbitrage and support two-way liquidity. Issuers should also be required to report, and where appropriate disclose, their eligibility criteria and the number and concentration of redeeming arbitrageurs.

- **Controls on secondary market amplification.** Regulated domestic CEXs should be subject to leverage and margin limits, conservative collateral haircuts, orderly liquidation controls, and a minimum supervisory reporting set for stablecoin pairs with material cash-out activity. Measures of this kind are already used in other areas of leveraged trading and margining.[20]

Stage 2: Measures for Fiat Cash-out

25 The second policy task is to calibrate the conditions under which a secondary market sale is converted into usable fiat funds. In many recipient jurisdictions, this is the most practical onshore lever because local users often depend on domestic banks, payment service providers (PSPs), and off-chain fiat rails to complete cash-out into locally usable fiat funds, even when the instrument they hold is an FCY stablecoin. Two measures are central:

- **Clarification of the responsible party for fiat cash-out.** Fiat cash-out typically depends on multiple entities. Authorities should therefore require one clearly identified party to bear responsibility for payout completion, user communication, and remediation when disruptions occur. Similar accountability principles already apply in other parts of finance, where service delivery depends on multiple entities and arrangements, but responsibility is still assigned to one clearly identified regulated party.[21] Depending on market structure, that role may sit with a dominant payout corridor operator or a regulated domestic CEX that initiates fiat cash-out at scale.

- **Concentration monitoring and contingency arrangements.** Authorities should require the responsible party to map key dependencies, monitor concentration in

[19] Examples include market making agreements, two-way quoting duties, and, in primary dealer systems, secondary market support obligations attached to official dealer status. ESMA (n.d.); Korea Ministry of Economy and Finance (n.d.).

[20] Leverage limits, margin requirements, and margin close-out rules are widely used to reduce forced-selling dynamics in leveraged products. For example, ESMA's product intervention measures on contract-for-differences (CFDs) include leverage limits on opening positions and a margin close-out rule set at 50% of minimum required margin. Conservative collateral haircuts and other anti-procyclicality tools are likewise common in margining frameworks. ESMA (2018); BCBS-CPMI-IOSCO (2022).

[21] Comparable accountability logic is used in financial market infrastructures, where the operator remains responsible for operational resilience and for managing dependencies on critical service providers, including communication and remediation expectations. CPMI-IOSCO (2012, 2022).

critical intermediaries and rails, and maintain ready-to-use backup payout arrangements and contingency procedures. Those arrangements should be subject to periodic supervisory review.

B. Enforceable Onshore Touchpoints

26 In practice, the effectiveness of these measures depends on whether they can be attached to enforceable onshore touchpoints. In recipient jurisdictions, major issuers and eligible redeemers of FCY stablecoins often remain offshore, so the key implementation question is which onshore touchpoints can apply the framework in practice, whether directly or indirectly. Three touchpoints are especially important:

- **Issuer-side support arrangements.** Some jurisdictions may also use domestic issuer-side support arrangements, for example by requiring a portion of readily available reserves or payout-support arrangements to be maintained with regulated local institutions[22] or establishing a locally supervised branch or subsidiary.[23] This lever allows more direct issuer engagement, but is often more feasible in larger jurisdictions.

- **CEXs.** Regulated domestic CEXs can directly implement measures aimed at par transmission through listing or facilitation rules and trading-layer safeguards. Where they also initiate or facilitate fiat withdrawal at scale, they may become a key onshore touchpoint for Stage 2 cash-out measures.[24]

- **Payout corridor parties.** Responsible payout corridor parties can directly implement measures aimed at fiat cash-out by governing the delivery of usable fiat funds, payout concentration, and contingency arrangements. They can also extend selected Stage 1 measures indirectly by providing fiat cash-out only for stablecoins and conversion pathways that satisfy domestic requirements.

27 The enforceability problem is especially acute for FCY stablecoins. In many recipient jurisdictions, issuers and eligible redeemers remain offshore, while sizable onshore conversion venues may also be limited. As a result, the most reliable onshore lever often lies at the cash-out stage rather than at the issuer or conversion side. Where domestic CEXs are absent or limited,[25] responsible payout corridor parties may become the primary onshore gate through which both cash-out stage requirements and selected Stage 1 conditions are enforced indirectly. The effectiveness of the policy framework therefore depends not only on the content of the rule, but also on whether a credible onshore touchpoint exists to implement it.

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[22] The U.S. approach can be read as creating onshore reserve touchpoints rather than merely setting asset-eligibility rules. The GENIUS Act ties reserves to specified forms, requires disclosure of custody location, and, for foreign issuers, requires reserves in a U.S. financial institution sufficient to meet U.S. customer liquidity demands. The Office of the Comptroller of the Currency (OCC)'s proposed implementing rule complements this by channeling readily available funds through eligible financial institutions and by considering minimum holdings of readily available reserve assets such as demand deposits and reserve balances. United States (2025); OCC (2026).

[23] A recent Korean legal update reports that foreign-issued stablecoins may be permitted to circulate domestically only if the issuer is licensed in its home country in accordance with international standards and maintains a domestic branch in Korea. Bae, Kim & Lee (2026).

[24] A limited analogue appears in Section 8 of the GENIUS Act. If a foreign payment stablecoin issuer is designated noncompliant and does not come into compliance within 30 days, the Secretary of the Treasury must issue a Federal Register notification prohibiting digital asset service providers from facilitating secondary trading of that issuer's payment stablecoins in the United States. United States (2025).

[25] Such cases may also involve other locally facing intermediaries that facilitate stablecoin conversion or fiat exit. In this report, such cases are treated functionally within CEXs or payout corridor parties as relevant. FATF (2021).

28 **Section IV yields two main implications.** First, policy calibration should be organized around Stage 1 and Stage 2 measures. In practice, that calibration should also be allowed to differ across FCY and LCY instruments in line with domestic policy objectives. Second, implementation in recipient jurisdictions should begin from enforceable onshore touchpoints, especially where offshore actors lie outside the domestic perimeter. Section V applies this logic to the ASEAN+3.

V. Implications for ASEAN+3

29 **Section V applies the framework to the ASEAN+3.** Two considerations are central:

- **Operational enforceability.** The starting point is which onshore touchpoints actually exist and what measures they can implement directly or indirectly (Fu et al. 2025). In some jurisdictions, issuer-side support arrangements, CEXs, and payout corridor parties may all be available. In others, payout corridor parties may be the only credible onshore lever. For many ASEAN+3 jurisdictions, LCY arrangements may be able to rely on all three touchpoints, while FCY stablecoins are more likely to be governed mainly through payout corridor parties.

- **Policy stance.** The relevant question is not whether to accommodate or prohibit stablecoins in general, but how far domestic support, conditioning, or visibility should extend across instruments. For FCY stablecoins, the emphasis may fall more heavily on conditioning and visibility at onshore touchpoints. For LCY arrangements, the same framework may still apply, but not always in the same form or intensity, depending on domestic policy objectives. Operational enforceability and policy stance should therefore be assessed together.[26]

30 **For ASEAN+3 authorities, operational enforceability can be translated into a limited set of regulatory patterns.** Those patterns do not determine policy stance on their own. But they do indicate which measures can be applied directly, which must be applied indirectly, and where the main onshore touchpoint is likely to sit. Table 2 summarizes three broad patterns and the corresponding regulatory focus.

Table 2. Operational Enforceability Patterns in the ASEAN+3 (Typology)

Pattern	Main onshore touchpoints	Main application
Jurisdictions with all three touchpoints	Issuer-side support arrangements, CEXs, and payout corridor parties	Wider set of direct measures across par transmission stage (Stage 1) and fiat cash-out stage (Stage 2)
Jurisdictions where payout corridor parties dominate	Payout corridor parties, with limited issuer-side or CEX touchpoints	Direct Stage 2 measures; indirect selected Stage 1 measures through payout corridor parties
Jurisdictions with limited onshore touchpoints	Limited issuer-side or CEX touchpoints; cash-out often routed offshore	Visibility, reporting, and conditional treatment of residual onshore cash-out touchpoints

Source: Author.

[26] This framework is most relevant where conversion into fiat remains an important user need. If digitalization advances to the point that users can routinely transact and settle without returning to fiat, control over conversion and cash-out routes may become a less decisive policy lever. That scenario is not treated as the baseline for the ASEAN+3 at present.

31 **A regional dimension can strengthen this framework.** Implementation remains domestic, but regional cooperation can help authorities share information on offshore issuers and CEXs, compare cash-out patterns and time-to-cash indicators, and develop common expectations for monitoring and disclosure at onshore touchpoints. The importance of such cross-border cooperation has also been emphasized by international bodies, reflecting the multi-jurisdictional nature of stablecoin arrangements (FSB 2023). Such cooperation could reduce blind spots where the same offshore arrangements reach multiple jurisdictions.

VI. Conclusion

32 **Reserve-centric oversight, while necessary, does not fully address the policy problem posed by stablecoins in recipient jurisdictions.** Retail users generally do not rely on direct issuer-side redeemability. Their outcomes depend on whether primary market par is transmitted into secondary market pricing and whether secondary market sale can be completed through a predictable fiat cash-out route. For that reason, retail convertibility is the more practical policy object. The policy focus therefore needs to extend beyond reserve fundamentals to the conditions under which retail convertibility is formed.

33 **On that basis, the report identifies three main sources of vulnerability.** These are segmented redeemability and concentrated arbitrage capacity, secondary market amplification, and frictions in fiat cash-out through the payout corridor. It then sets out a policy framework organized around Stage 1 measures for par transmission and Stage 2 measures for fiat cash-out, and shows how those measures can be implemented through enforceable onshore touchpoints. That framework allows domestic authorities to govern, condition, limit, or make visible the retail convertibility conditions that matter most for local users, rather than treat convertibility as a uniform policy objective across instruments.

34 **For the ASEAN+3, the main implication is that stablecoin policy should begin from domestic function and enforceability rather than instrument labels alone.** The immediate issue is still largely offshore FCY stablecoins reaching domestic users through local conversion or cash-out channels. But future LCY instruments may take a wider range of forms and may not always rely on the same market structure. Recipient jurisdictions therefore do not need to choose between uniform accommodation and broad restriction. They can calibrate retail convertibility conditions differently across instruments in line with domestic policy objectives, using the enforceable onshore touchpoints available to them.

Boxes and Annexes

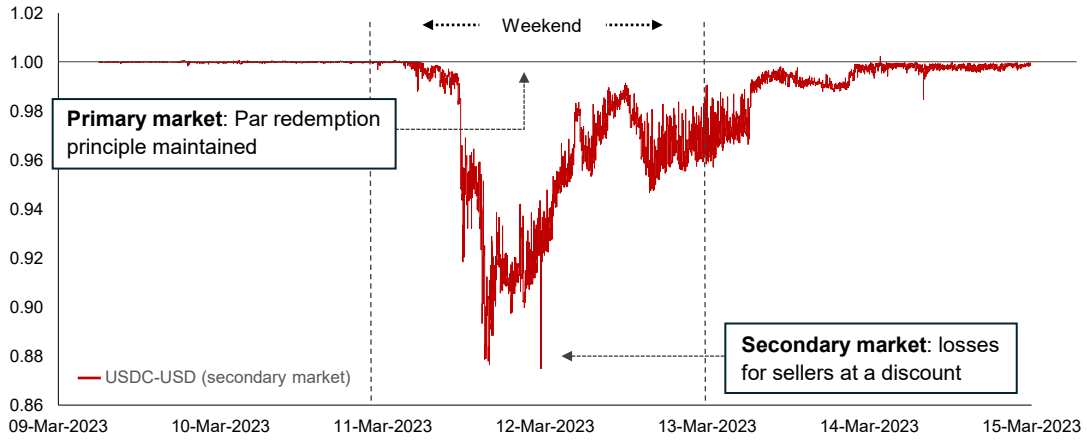
Box A. USDC during the SVB Episode: Par Redemption in the Primary Market, Discount in the Secondary Market[27]

USDC briefly decoupled from USD1 in the secondary market even though the primary market par anchor ultimately remained intact for eligible redeemers. At around 22:00 EST on March 10, 2023, Circle disclosed that USD3.3 billion of USDC reserves remained at Silicon Valley Bank (SVB), and USDC began to trade below par; by around 03:00 EST on March 11, it had fallen to about USD0.88. The initial trigger was therefore reserve-related news. Over the weekend of March 11–12, primary market issuance and redemption were constrained by U.S. banking hours while secondary market trading continued on a 24/7 basis. During this period, USDC traded materially below USD1, implying that secondary market sellers could realize losses relative to par (Figure A.1).

The episode exposed a simple asymmetry: a primary market par anchor can remain in place while the secondary market clears at a discount. Reserve uncertainty triggered the shock, while weekend closure of off-chain fiat rails amplified the wedge between primary market par and secondary market exit prices. After Circle stated on March 13 that the deposits were secured and accessible, and off-chain fiat rails reopened, eligible counterparties again redeemed at par and USDC re-anchored; realized losses, by contrast, were borne primarily by secondary market sellers who exited below par.

Figure A.1. USDC–USD Price Deviation from Par, March 9–14, 2023 (UTC)

(US dollar)



Source: Bloomberg.

Notes: USDC's secondary market (USDC–USD) price traded at a pronounced discount over March 9–14, 2023, with the sharpest dislocation concentrated over the weekend. (1) In the *primary market*, off-chain fiat rail constraints lengthened redemption time-to-cash, but Circle maintained the principle of par redemption for eligible redeemers. (2) In the *secondary market*, some venues temporarily constrained one-for-one conversion pathways over the weekend, and the USDC–USD price fell to around USD0.88, implying realized losses for investors who sold at a discount.

[27] Kaiko (2023a, 2023b).

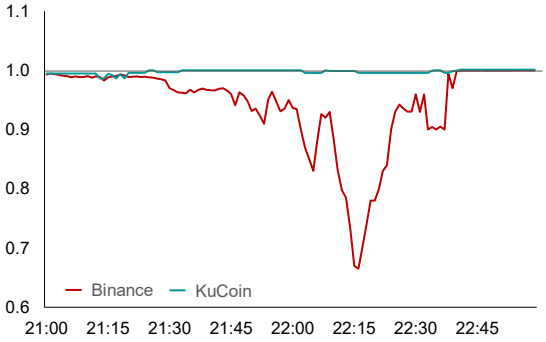
Box B. Liquidation-Amplified Venue Dislocation (USDe Case)[28]

USDe traded at a sharp, short-lived discount on Binance during the market sell-off between 21:36 and 22:16 UTC on October 10, 2025 (Binance 2025, Ethena Foundation 2025). The window coincided with a sharp drop in major cryptoasset prices and a broad deleveraging wave in derivatives markets. It briefly traded as low as about USD0.65. USDe is not a fiat-backed stablecoin, but it was marketed as a *synthetic dollar*; it is a USD-referenced structure supported by crypto collateral and hedging rather than direct holdings of cash or short-term government securities.

The deepest price move was concentrated on Binance's spot order book. By contrast, KuCoin, another major centralized exchange, traded close to par during the same period (Figure B.1).

A venue-specific collateral and liquidation loop appears to have amplified the dislocation. Binance allowed USDe to be posted as collateral in several products, and when the venue's internal pricing and risk systems marked accounts against the distressed spot print, margin calls and forced liquidations mechanically increased USDe selling pressure into thinning depth.

Figure B.1. USDe Spot Price Dislocation: Binance vs KuCoin, 21:00-23:00, October 10, 2025
(US dollar)



Sources: Binance; KuCoin.

This episode illustrates two lessons. First, stablecoin-like tokens can exhibit abrupt, localized discounts even when protocol-level mechanisms and on-chain pricing remain comparatively stable. Second, fragmented liquidity and leverage-driven forced flows should be assessed jointly when evaluating secondary market resilience.

[28] Binance (2025); Ethena Foundation (2025).

Annex 1. Par Transmission from Primary Market to Secondary Market (Figure 1)

This annex clarifies the transmission mechanism through which primary market par can support near-par pricing in the secondary market. Par in the primary market is the contractual anchor of the arrangement, but it does not by itself determine the price at which most users can exit. That outcome depends on whether arbitrage can carry the primary market anchor into the secondary market under workable conditions.

The mechanism has three elements. *The first* is the issuer-side anchor. The issuer stands ready to issue or redeem at par under stated terms, but only for a limited class of eligible redeemers. This establishes the reference point of the arrangement. *The second* is the arbitrage link. When the secondary market price moves away from par, eligible redeemers may have an incentive to acquire stablecoins in the secondary market and redeem at par, or to create at par and sell into the secondary market, depending on the direction of the deviation. *The third* is the secondary market itself, where most users transact and where near-par pricing is observed in practice.

The analytical implication is that near-par pricing in the secondary market is not a direct legal entitlement for most users. It is a market outcome supported by the workability of the arbitrage pathway. That pathway must remain sufficiently open, timely, and operationally reliable for primary market par to influence actual trading outcomes. When that pathway works, secondary market prices can remain close to par. When it weakens, deviations can persist even if issuer-side redemption terms remain formally unchanged.

This distinction is central to the report's broader argument. Redeemability belongs to the primary market and attaches to those with direct issuer access. Retail convertibility is broader. It concerns whether users without such access can still obtain near-par value through actual trading and cash-out routes. The relevant policy question is therefore not only whether par exists at the issuer level, but whether that anchor can be transmitted into practical exit conditions for the wider user base.

The annex also frames how price deviations should be interpreted. A deviation from par in the secondary market does not by itself establish insolvency, nor does it necessarily signal a run. Small and short-lived deviations may reflect ordinary market frictions. The policy significance arises when deviations become persistent, broad-based, or difficult to arbitrage away. In such cases, the issue is no longer the existence of a formal par anchor alone, but the weakening of the mechanism that is expected to connect that anchor to actual market outcomes.

Viewed in that way, Figure 1 is not merely illustrative. It sets out the minimum transmission logic that underpins the report's distinction between redeemability and retail convertibility and explains why reserve soundness, while necessary, is not sufficient on its own to secure user-facing stability.

Annex 2. Retail Convertibility: Transaction Flow and Vulnerabilities (Figure 2)

This annex sets out the transaction flow through which retail convertibility is delivered in practice and identifies the main points at which that flow can weaken. The analysis proceeds in two linked stages. *The first* concerns the transmission of primary market par into secondary market execution. *The second* concerns the completion of fiat cash-out after a secondary market sale. The distinction matters because a conversion outcome is not complete at trade execution alone. It is complete only when usable fiat funds are received.

Stage 1 concerns par transmission. The issuer provides the contractual par anchor in the primary market, but most users do not access that market directly. They exit through the secondary market. The first question is therefore whether the primary market anchor can be transmitted into near-par execution in the market where users actually trade. That transmission depends on the effectiveness of arbitrage. It can weaken when redeemability is segmented, when effective arbitrage capacity is concentrated, or when arbitrage becomes less responsive under stress. In those conditions, the secondary market may clear at a discount even though formal par remains available to those with direct issuer access.

Stage 2 concerns fiat cash-out. For most users, selling the stablecoin does not by itself complete conversion into fiat. The proceeds must still pass through a payout corridor that includes the relevant banking or payment intermediaries, access points, and off-chain fiat rails. The second question is therefore whether the fiat leg remains operationally reliable and sufficiently timely for the user to obtain usable fiat funds. Even when the secondary market sale is completed, convertibility can still weaken if the payout corridor becomes slow, uncertain, capacity-constrained, or operationally disrupted.

Figure 2 also clarifies the location of the main vulnerabilities. Along *Stage 1*, the principal weaknesses arise in par transmission. These include segmented redeemability, concentrated arbitrage capacity, and forms of secondary market amplification such as venue fragmentation, leverage, liquidations, or one-sided order flow. These conditions can deepen discounts or slow re-anchoring even when the issuer-side anchor has not changed. Along *Stage 2*, the principal weaknesses arise in fiat cash-out. These include cut-off constraints, limited payout capacity, concentration in a narrow set of intermediaries, compliance-related delay, contingency failure, and disruption in the fiat rail. In such cases, the user's realized outcome can deteriorate through longer time-to-cash, failed completion, or higher attrition.

Two broader implications follow. First, user-facing stability is not delivered in a single step. It depends on the continuity of two linked transmission stages. Second, vulnerabilities can arise outside the issuer balance sheet even when reserves appear sound and formal redemption terms remain in place. A user may still encounter a secondary market discount, a delayed or uncertain fiat payout, or both. This is why the report treats retail convertibility, rather than issuer-side redeemability alone, as the relevant analytical and policy object.

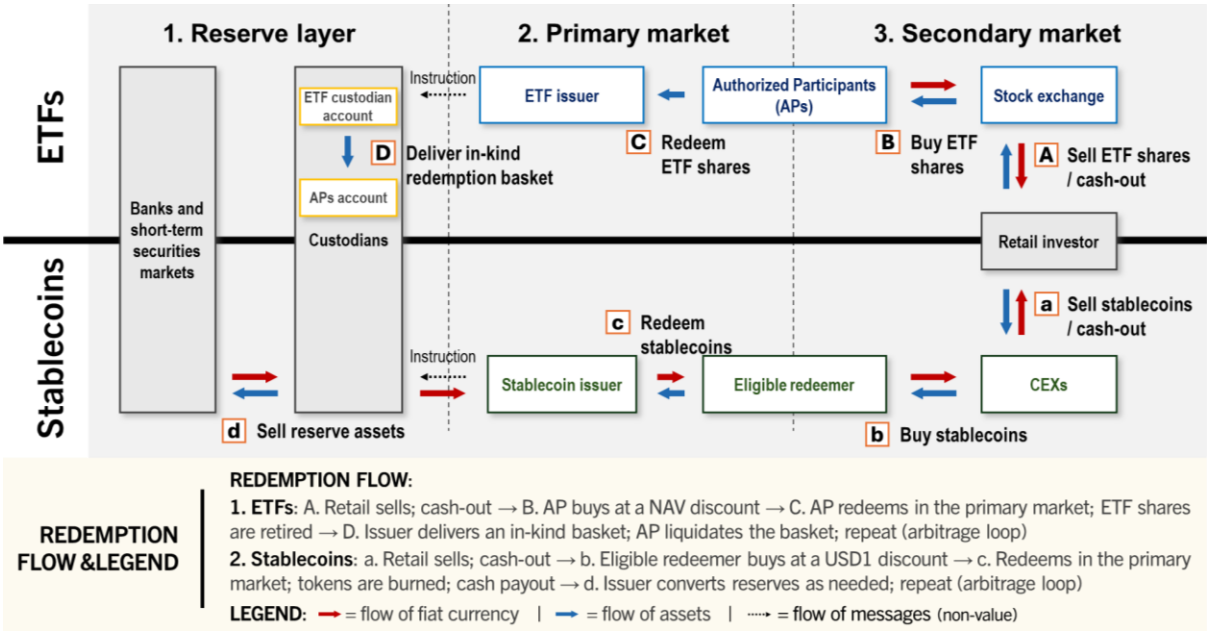
Figure 2 therefore serves as the operational bridge between the report's mechanism, vulnerability analysis, and policy framework. It explains why the report organizes vulnerabilities and policy measures into Stage 1 and Stage 2 and why domestic policy attention must extend beyond reserve quality to the market and payout conditions through which users actually exit.

Annex 3. ETF Benchmark for the Arbitrage Pathway

A useful way to interpret stablecoins is to benchmark them against instruments that also combine a primary market and a secondary market. Exchange-Traded Funds (ETFs) provide a relevant comparator because both structures rely on segmented primary market access, secondary market trading, and arbitrage-based price anchoring. The analogy is not exact. But it helps clarify which parts of the stablecoin arrangement resemble structures already familiar from financial markets, and where stablecoins are more exposed to operational and regulatory gaps.

The structural similarity is straightforward. In an ETF, most investors trade in the secondary market, while a narrower set of authorized participants (APs) interacts with the fund in the primary market through creation and redemption. Arbitrage by APs helps keep the secondary market price close to net asset value (NAV). Stablecoins have a comparable two-layer structure. Most holders trade in the secondary market, while a narrower set of eligible redeemers interacts directly with the issuer in the primary market. In both cases, primary market access is segmented, and secondary market pricing depends on whether a small set of intermediaries can arbitrage deviations effectively (Figure 3).

Figure 3. Stylized Comparison of Redemption Flows in ETFs and Stablecoins



Source: Author.

The differences are just as important (Table 3). First, the anchor differs. ETF shares are floating claims linked to NAV, whereas stablecoins are designed around a fixed primary market par anchor. Second, the redemption form differs. ETF primary market processing is commonly in kind, whereas stablecoin redemption is typically a fiat payout funded from reserves as needed. Third, the timing structure differs. ETF arbitrage operates within a single securities infrastructure, while stablecoin arbitrage spans a 24/7 on-chain stablecoin rail and time-constrained off-chain fiat rails. Fourth, the legal form differs. ETF shares are account-based non-bearer claims, whereas stablecoins are token-based and bearer-like. These differences make stablecoin retail convertibility more dependent on the workability of the cash-out route.

Table 3. ETF Benchmark and Stablecoin Arrangement: Structural Comparison

Dimension		ETFs	Stablecoins	Why it matters for the stablecoin's peg promise
Venue	**Where most trading occurs**	Secondary market		The peg is observed in the secondary market
Eligibility	**Who can access primary market**	Large intermediaries (authorized participants (APs) for ETFs; eligible redeemers for stablecoins)		Segmented access can delay arbitrage under stress
Form	**What primary market delivers**	In-kind baskets (creation units, CUs)	Fiat payout	Funded from reserves (asset sales as needed)
Anchor	**Reference for par**	NAV floated by portfolio valuation	Contractual redemption fixed at par	Fixed-par redemption serves as the benchmark for secondary market cash-out
Timing	**Settlement timing mismatch**	No (single rail)	Yes (24/7 on-chain stablecoin rail vs non-24/7 off-chain fiat rail)	Time-to-cash depends on the off-chain fiat leg
Legal nature	**Legal form of the claim**	Account-based; non-bearer	Token-based; bearer-like	Regulated off-chain fiat rail matters for cash-out

Source: Author.

Note: White-shaded cells indicate similarities, and gray-shaded cells indicate differences, between the two instruments.

This comparison is useful because it shows why reserve strength alone does not settle the policy question. In an ETF, the full arbitrage pathway sits within a comparatively integrated securities framework. Key roles, duties, and operating standards are defined and supervised across the fund, APs, trading venues, clearing, settlement, and broker conduct. Stablecoins are different. Issuer-side safeguards may be relatively developed with respect to reserves, custody, redemption terms, and governance. But the transmission of primary market par into secondary market outcomes, and the completion of fiat cash-out, often depend on banks, payment service providers, off-chain fiat rails, and major trading venues that sit under separate mandates and across multiple legal regimes.

For that reason, the ETF benchmark helps identify where stablecoin rules remain thin along the arbitrage pathway. Three areas stand out. The first is access-linked obligations on the primary market side, including expectations on the effective capacity and concentration of redeeming arbitrageurs. The second is the cash-out leg, where rules on the responsible party, payout completion, concentration dependencies, and contingency arrangements are often less specified than they are in securities market infrastructures.

The benchmark should not be overstated. It does not imply that stablecoins should be regulated as ETFs. The point is narrower. ETF regulation provides a benchmark for what more complete arbitrage pathway coverage can look like. Stablecoins remain structurally more dependent on segmented redeemability, cross-rail timing, and the operational reliability of fiat cash-out. That is why recipient-jurisdiction policy cannot stop at issuer-side reserve safeguards. It also needs to consider the conditions under which retail convertibility is actually delivered.

Annex 4. U.S. Treasury Market and Stablecoin Plumbing[29]

At present, fiat-backed stablecoins are, in effect, "Treasury-intermediated" claims. The issuers of two major stablecoins, USDC and USDT, report reserve portfolios concentrated in U.S. Treasury-related instruments. Even when those portfolios are dominated by cash-like U.S. Treasury bills and Treasury reverse repurchase agreements, meeting large redemptions under stress can still require converting Treasury exposures into commercial bank deposits through the U.S. Treasury cash and repo markets.

This conversion is not frictionless because it is market-intermediated. The liquidation chain typically runs through broker-dealers and dealer banks whose balance-sheet capacity and access to central bank reserves can become binding precisely when selling pressure rises. In such states, stablecoin issuers may face higher liquidation costs, longer settlement lags, or outright processing delays, even if the underlying reserve assets remain high quality.

Recent episodes illustrate that Treasury and repo market functioning can deteriorate abruptly under stress. The September 2019 repo rate spike and the March 2020 "dash for cash" episode both reflected capacity constraints in Treasury market intermediation and reserve distribution, prompting official-sector interventions to restore market functioning. These episodes matter for stablecoins because redemptions that are met by Treasury sales effectively add to the same stress-sensitive flow.

The interaction can run in both directions. A surge in stablecoin redemptions can increase Treasury selling or reduce repo rollover, pushing broker-dealers toward capacity limits. Conversely, a disruption in Treasury market liquidity or repo funding can weaken expectations of timely cash-out, widening secondary market discounts and triggering further sell-and-convert pressure.

These channels are best understood as "plumbing" risks rather than reserve-quality risks. They sit between par in the primary market and retail outcomes in the secondary market, and they operate through settlement windows, dealer intermediation constraints, and the operational reliability of fiat cash-out corridors. In that sense, Treasury market resilience is an upstream determinant of stablecoin time-to-cash predictability.

The policy implication is not that stablecoins should be supported to maintain trading prices at all times. Rather, it is that regimes centered on reserve composition alone may leave a gap in stress: the ability to turn Treasuries into deposits can be constrained by market structure. Supervisory frameworks can respond by requiring issuers to document and test liquidation and funding pathways under stress, manage concentration in dealer and banking access, and disclose operational expectations for time-to-cash—while recognizing that proposals to extend central bank access to stablecoin issuers raise broader tradeoffs for monetary and financial architecture.

[29] This annex provides a selective summary of Aronoff et al. (2026).

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