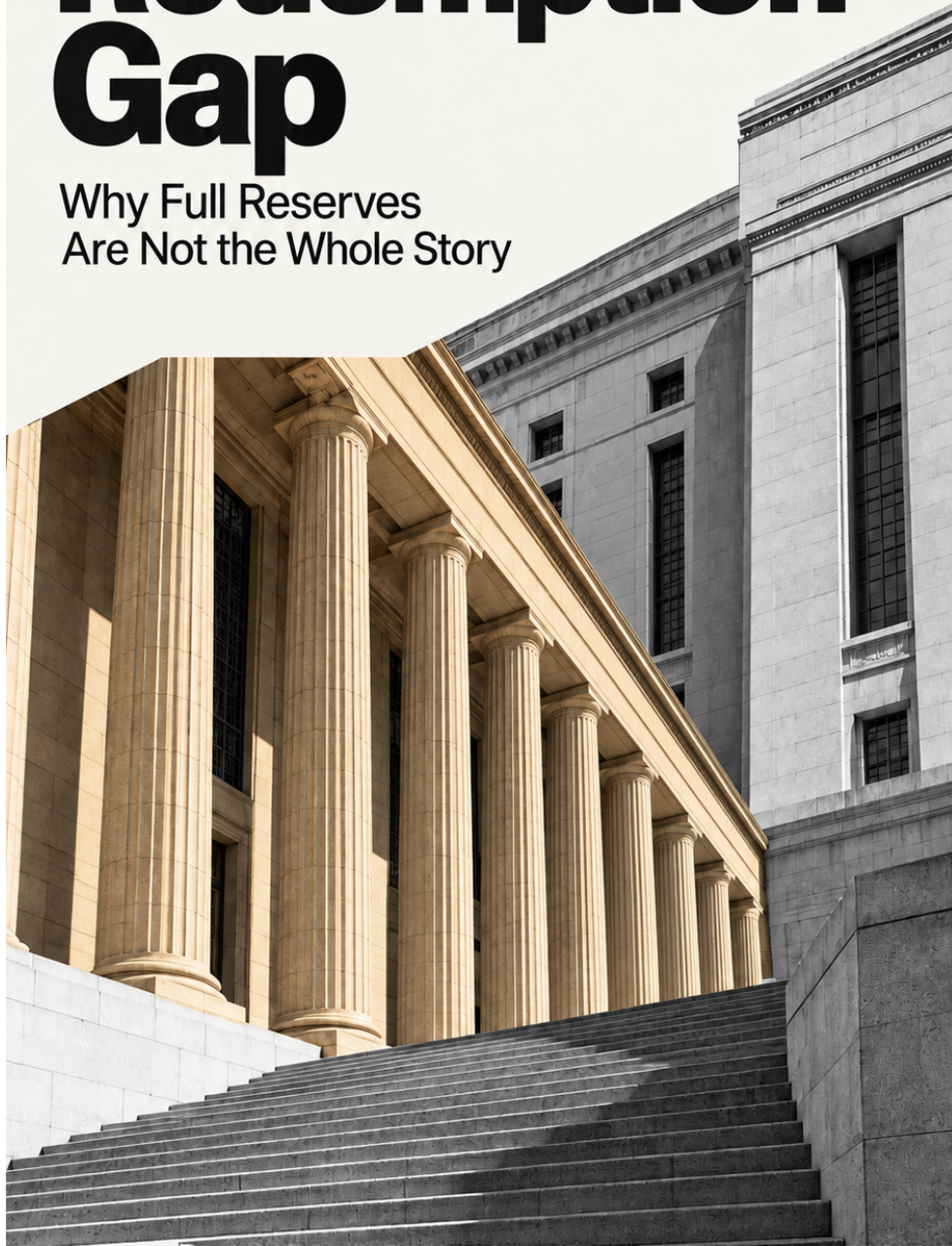


The Redemption Gap

Why Full Reserves
Are Not the Whole Story



RESERVE & LIQUIDITY STUDY
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The Redemption Gap: Why Full Reserves Are Not the Whole Story

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An issuer can hold assets worth more than all outstanding tokens and still need time to deliver bank money. For a company using stablecoins to meet an invoice, the relevant balance is the cash accessible before the deadline. This paper separates three questions that are often collapsed into a single claim of backing: whether assets cover liabilities, whether cash can be mobilized on time, and whether this holder has an operational path to receive it.

Our contribution is a reproducible liquidity model, informed by Hong Kong's supervisory framework and two dated issuer announcements. In a hypothetical HKD 100 million arrangement with HKD 102 million of reserves, a 20% redemption wave can leave a HKD 10 million immediate cash gap when only HKD 10 million is accessible. The arrangement is overcollateralized in the example; the payment queue still matters. This is a conditional result, not an assessment of a named issuer's reserves or a prediction of a run.

1. Three balances, three different questions

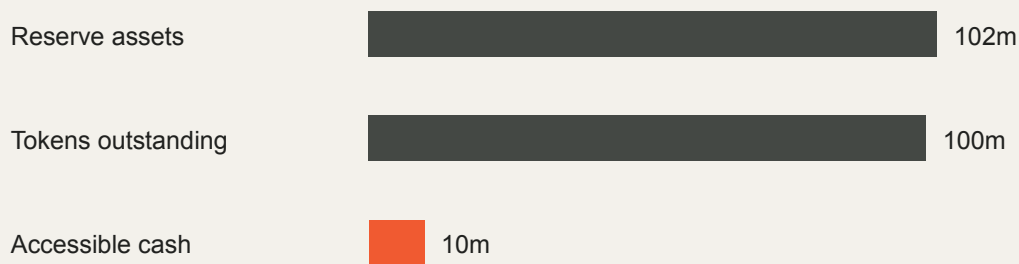
Define outstanding tokens at their reference value as **L**, total reserve market value as **R**, and cash deliverable through the redemption route before a chosen deadline as **C**. Reserve coverage is R/L . It compares asset value with a liability. Immediate cash coverage is C/Q , where Q is the value of valid requests due by that deadline. These ratios have different denominators because they answer different questions.

The distinction is useful even without a crisis. A business that buys a token on a secondary venue may not use the same withdrawal process as a distributor with a direct issuer account. A token credited to a wallet and money credited to a bank account are different endpoints. A research report that records only reserve composition leaves the second endpoint unmeasured.

We define the **redemption gap** as the amount of a specified request cohort that cannot be funded before its specified deadline using accessible cash and eligible incoming liquidity. The term is analytical. It is not a statutory ratio or a claim that a product has breached an obligation. A deadline must be chosen first: an internal treasury deadline, a contractual promise and a supervisory processing expectation are not interchangeable.

Assets are not the same as ready cash

Separate measures in a hypothetical HKD 100m arrangement



Panasia assumptions. Values in HKD million; not an issuer balance sheet.

2. What the public rules establish

Hong Kong's August 2025 supervisory guideline requires reserve market value at least equal to outstanding par value and expects an appropriate buffer. It distinguishes reserve management from redemption arrangements. Paragraph 3.3.3 generally expects valid requests to be processed within one business day after the day of receipt, unless otherwise approved. The qualifications concerning validity, reasonable fees and prior regulatory consent matter; the wording is not an unconditional promise of instant bank credit. Paragraphs 3.3.1-3.3.2 address redemption and insolvency rights, including an independent legal opinion. [1]

The FSB's July 2023 recommendations similarly treat governance, risk management, recovery and redemption rights as separate components of a stablecoin arrangement. They call for robust legal claims and timely redemption, with par redemption into fiat for single-currency arrangements. These are recommendations to authorities, not a substitute for a product contract or a global licence. [2]

Singapore provides a useful historical comparator. MAS's August 2023 framework announcement specifies a five-business-day par-redemption requirement for the single-currency stablecoins within its defined scope. We use that announcement to show why a numerical processing window must be read with its jurisdiction, scope and date. This paper does not treat the announcement as verification of the current licensing or operating status of any Singapore product. [7]

Our inference is narrower than a jurisdictional ranking: comparable evidence needs the same start and end events. A request submitted, a request accepted as valid, a token returned to the issuer and bank funds becoming usable can occur at different times. Ranking products by one headline number before aligning those events would measure documentation choices as much as payment performance.

3. Distribution changes the observed route

On 10 April 2026, HSBC announced its Hong Kong stablecoin issuer licence and a planned launch in the second half of 2026. Its selected release describes intended integration into PayMe and the HSBC HK App, with payments and tokenized investments among the planned uses. The statement is evidence of the licence and product plan at that date. It does not supply a series of completed redemptions or demonstrate the final launch status as of this paper. [4]

Standard Chartered's announcement on the same date describes Anchorpoint's licence and a planned B2B2C distribution model for HKDAP, using selected authorized distributors. This is a different distribution design from an application-centered proposition. The release does not disclose each distributor's redemption contract, cash inventory or service-level results. [5]

A June 2026 government reply provides an important intermediate observation. It states that the two licensed issuers needed to complete technology testing, risk arrangements and other preparations before official business launch. This prevents a licence date from being silently recoded as the date of full service availability. We retain the dated observations rather than infer what happened afterwards. [3]

Dated observation	What it supports	What it does not establish
HSBC, 10 April 2026 [4]	Licence announcement and intended application channels	Completed customer redemptions or measured cash-arrival times
Anchorpoint, 10 April 2026 [5]	Licence announcement and intended distributor model	Uniform redemption terms across future distributors
Government reply, 10 June 2026 [3]	Pre-launch preparations described by the authorities	A later launch date or subsequent transaction outcomes

For an empirical study, distribution is a variable to measure rather than a reason to declare one design superior. An integrated bank application might simplify account matching. A distributor network might widen access. Either could also change where operational work sits. The question is whether the end customer can identify the entity accepting the request, the asset owed, the fees, the exceptions and the completion timestamp.

4. A fully backed balance sheet can have a cash queue

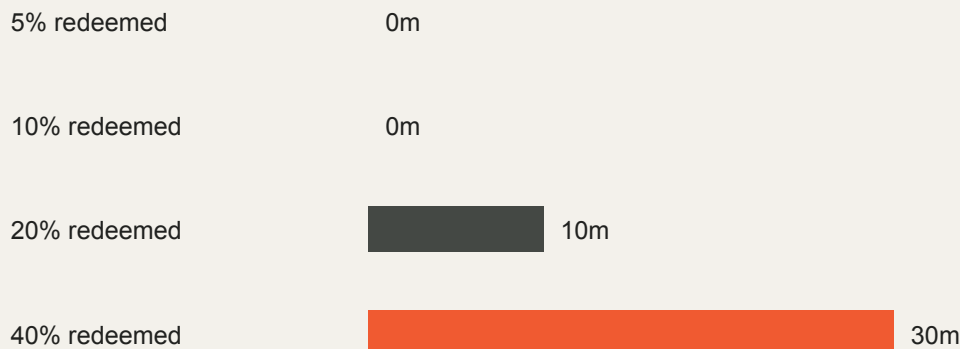
Consider a deliberately simplified arrangement. Tokens outstanding are HKD 100 million. Reserves have a market value of HKD 102 million: HKD 10 million is immediately accessible cash and HKD 92 million is securities that cannot produce settled cash before the chosen deadline. No new issuance receipts, credit lines or securities-sale proceeds arrive inside that window. The example assumes no default and initially no price change.

For a redemption fraction q of outstanding tokens, requests equal $Q = q \times L$. Immediate funding equals the lesser of Q and C . The uncovered amount is $\max(Q - C, 0)$. Opening reserve coverage is 102%. Request coverage below is the share paid immediately, $\min(C, Q) / Q$, capped at 100%.

Redemption requests	Request value	Immediately paid	Cash gap at deadline	Request coverage
5% of tokens	HKD 5m	HKD 5m	HKD 0m	100%
10% of tokens	HKD 10m	HKD 10m	HKD 0m	100%
20% of tokens	HKD 20m	HKD 10m	HKD 10m	50%
40% of tokens	HKD 40m	HKD 10m	HKD 30m	25%

The cash gap grows with the request cohort

HKD 10m immediately accessible; no incoming liquidity before the deadline



Panasia scenario: $\max(\text{requests minus accessible cash}, \text{zero})$.

These rows are scenario arithmetic, not observed issuer data. The securities remain assets even when their proceeds arrive later. Calling the cash gap an asset shortfall would therefore misstate the example. Equally, reporting only the 102% reserve ratio would omit the deadline. Both statements can be true: the balance sheet has a positive buffer, and some requests cannot be funded inside the selected window without another source of liquidity.

The model also exposes what would falsify the apparent bottleneck. If HKD 15 million of reliable incoming cash arrives before the deadline, the 20% request cohort is fully funded. If a committed facility can be drawn in time, accessible liquidity rises. If the contractual deadline is later than securities settlement, the same opening balance sheet can meet that later deadline. Those are changes to assumptions, not contradictions of the calculation.

Timing should be modeled as a schedule

For each time interval t , use opening cash $C(t)$, eligible inflows $I(t)$, and requests due $Q(t)$. The paid amount is limited by available cash; unfilled requests carry forward. Once a security is sold, record the proceeds at settlement rather than at trade execution. Once a facility is drawn, record both the cash and the new repayment obligation. A reconciliation that increases available cash without recognizing the corresponding liability overstates the improvement.

Do not count new minting receipts as permanent rescue capacity. If new tokens are issued against those receipts, liabilities rise as well. Net inflows can help a short window, but their absence should be tested independently. A robust exercise should also distinguish committed facilities from indicative quotations and legally segregated cash from cash held elsewhere in an organization.

5. The price of replenishing cash

The next question is how much reserve value is consumed when the cash gap is filled. Suppose the arrangement must raise HKD 10 million by selling securities, and net proceeds are 99.5% of their pre-sale reference value. Securities worth $10 / 0.995 = \text{HKD } 10.050251 \text{ million}$ must be sold. The

incremental loss is approximately **HKD 50,251**. This is an assumed execution discount, not a market quote.

After paying HKD 20 million in total redemptions, reserves are about HKD 81.949749 million and tokens outstanding are HKD 80 million. The remaining buffer is about HKD 1.949749 million. The accounting identity is important: paying a redemption reduces both assets and token liabilities, while the execution loss reduces the buffer. Subtracting the entire redemption from the buffer would be incorrect.

Assumed execution discount	Securities sold to raise HKD 10m	Loss against reference value	Remaining absolute buffer
0.0%	HKD 10.000000m	HKD 0	HKD 2.000000m
0.5%	HKD 10.050251m	HKD 50,251	HKD 1.949749m
1.0%	HKD 10.101010m	HKD 101,010	HKD 1.898990m
2.0%	HKD 10.204082m	HKD 204,082	HKD 1.795918m

The starting value must be defined consistently. If reserve market value already incorporates the same execution discount, applying it again would double-count the loss. Here the discount represents an additional cost relative to the opening reference valuation. The calculation assumes the remaining securities retain their reference value; a portfolio-wide price shock would require revaluing them too.

This creates two independent stress axes: time to accessible cash and deterioration in realizable value. A fast sale at a material discount may solve the first while worsening the second. A high-quality portfolio with slow operational release may show the reverse. Combining both axes produces a more informative test than a single reserve-percentage headline.

6. The economics of a larger cash sleeve

Holding more immediately accessible cash reduces the modeled gap but can carry an opportunity cost. If an extra HKD 10 million is held in cash earning 1% rather than assets earning 3%, the assumed annual income difference is HKD 200,000. Relative to HKD 100 million of outstanding tokens, that is 20 basis points per year. It is a cost of these selected assumptions, not evidence that any issuer earns those rates or should choose that allocation.

A useful decision model compares that annual cost with expected benefits: fewer delayed requests, lower emergency funding costs, less forced selling and operational resilience. These benefits cannot be assigned arbitrary monetary values and then presented as measured savings. If event frequencies and loss severity are unknown, report a break-even condition instead. For example, HKD 200,000 of annual avoided costs would offset the assumed income difference; the paper does not estimate the probability of achieving it.

The wider monetary context also matters. The BIS's 2025 framework distinguishes tokenized central bank reserves, commercial bank money and other digital claims when discussing settlement design. Moving a record onto a programmable platform does not make these different liabilities economically identical. We use that distinction to motivate identifying the final asset owed to the holder, not to rank the resilience of the two issuer plans above. [6]

7. What an actual test would need to record

A useful dataset would begin with every request in a defined observation period, including cancelled, rejected and delayed requests. Record submission, validation, token receipt, payout instruction and usable-bank-credit times, along with reason codes and fees. A median computed only from successful automated requests would understate the experience of users whose cases enter manual review.

Pair that request log with a time-stamped liquidity schedule. It should identify cash by custodian and currency, security trades and their settlement dates, committed facilities and draw conditions, and operational outages. The two records allow an analyst to distinguish a cash shortage from an identity-check delay, incorrect bank details or a payment-system interruption. Each has a different remedy and should not be compressed into a single blockchain latency number.

Compare like with like. A customer who is already onboarded should be separated from a first-time holder. Weekday requests should not be compared unadjusted with weekend requests. Large institutional requests may use different paths from small app withdrawals. Publish cohort sizes, percentile completion times and the share still unresolved at the observation cutoff. This is a proposed study design; no such issuer-level dataset was obtained for this paper.

The central hypothesis would weaken if deadline-specific accessible liquidity added no explanatory value after controlling for request validity and operating interruptions. It would strengthen if cash mobilization consistently explained the tail of completion times. Either outcome would be more useful than treating asset backing as a complete measure of customer liquidity.

Method, limits and conclusion

This is a public-source analytical paper with an explicit hypothetical balance sheet. Source selection is purposive: a supervisory guideline, international policy work, dated issuer plans and an official implementation update. The seven references are not seven independent empirical observations. The two firms are research subjects; the paper implies no relationship with or endorsement of Panasia.

The calculation workbook is supplied as CSV with unrounded values, assumptions and formulas. It excludes interest accrual during the short stress window, taxes, bank failure, FX mismatch, operational capacity limits and feedback from token-market prices. Adding those effects could materially change results. No customer transactions, internal reserve records, legal opinions or confidential contracts were reviewed. Regulatory passages provide dated context rather than a product-specific legal conclusion.

The defensible finding is conditional and operational: full asset backing and timely cash delivery are distinct tests. A buyer should be able to follow both the claim and the cash route. A future empirical paper should measure the entire redemption interval, rather than use reserve coverage or token-transfer speed as a proxy for the endpoint that the holder actually needs.

References

- [1] Hong Kong Monetary Authority. August 2025. *Guideline on Supervision of Licensed Stablecoin Issuers*, paragraphs 2.2.1 and 3.3.1-3.3.5. Final supervisory guideline.
- [2] Financial Stability Board. 17 July 2023. *High-level Recommendations for the Regulation, Supervision and Oversight of Global Stablecoin Arrangements: Final report*. Recommendations.
- [3] HKSAR Government. 10 June 2026. *LCQ6: Development and regulation of stablecoins*. Official reply.
- [4] HSBC. 10 April 2026. *HSBC welcomes HKMA's grant of a Hong Kong stablecoin issuer licence*. Issuer announcement.
- [5] Standard Chartered. 10 April 2026. *Standard Chartered-backed Anchorpoint granted Stablecoin Issuer Licence by the Hong Kong Monetary Authority*. Issuer-group announcement.
- [6] Bank for International Settlements. June 2025. *The next-generation monetary and financial system*, Annual Economic Report, chapter III. BIS analysis.
- [7] Monetary Authority of Singapore. 15 August 2023. *MAS Finalises Stablecoin Regulatory Framework*. Historical framework announcement; not used to certify present product status. Official release.