Can Small Merchants Join Without an Upfront Deposit?

Settlement liquidity and loss allocation in stablecoin payment networks

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Abstract

A payment network may require a merchant to lock up funds before its first sale. This working paper develops the deposit-free entry proposal in Chapter 6 of Target Money and asks what happens when the network drops that requirement. The proposition is that lower upfront costs can improve entry where cash constraints are binding, provided a committed liquidity facility covers settlement timing gaps and a separate allocation of losses covers merchant default. A worked example and a pilot design specify how to evaluate entry, funding costs, and the reliability of payouts.

1. Why remove the deposit?

A small repair shop considering a new payment network may have little idea how many customers will use it. A refundable deposit still ties up money that could pay for parts, wages, or rent. The cost can be especially high relative to expected sales for merchants testing a second payment channel. Requiring a volatile governance token as the deposit adds price exposure even before the merchant makes a sale. Target Money proposes entry without such a token purchase. This paper examines the economic conditions under which dropping an upfront deposit can work.

Three balances matter. A merchant entry deposit is money the participant locks to gain access. Settlement liquidity is money available when payouts fall due. Loss resources absorb shortfalls after a merchant or counterparty fails to meet an obligation. A deposit sometimes supports one of the latter functions, depending on its terms. Once the deposit is removed, the operator must identify which function needs replacement.

2. A test of liquidity and loss capacity

Suppose the network offers early payout before incoming customer funds are available for outbound settlement. At each payout cutoff, let P be the value of obligations due and C the usable, unencumbered cash and confirmed inflows available by that cutoff. The funding gap equals the greater of zero and P minus C. An operator can cover it with its own liquid assets or a committed facility that can actually be drawn in time. Track available funding by currency and payout window. The CPMI's work on cross-border payment liquidity concerns a different institutional setting, but it illustrates why the location and availability of funding can affect payment costs.

A second calculation tracks losses from refunds, reversals, operational errors, or failures to collect. Calculate gross exposure and expected recoveries separately. Assign the residual to the party contractually responsible and verify that it has resources to bear it. A liquidity facility provides funding for a timing gap and typically creates a repayment

obligation. An internal credit entry or an estimate based on token prices cannot by itself fund a payout or absorb a loss.

3. Applying the model to a merchant pilot

Start with a group of participating merchants that can join without a fixed deposit. Offer the standard payout schedule and disclose a capped early-payout option where the operator can fund it. Assign responsibility for a failed collection or refund before the first transaction. Record each payout against the underlying purchase and the funds available to settle it. If available liquidity is insufficient, apply the disclosed standard schedule or cap new early payouts. Distinguish funds held for stablecoin redemption from funds committed to merchant advances.

For illustration, merchants are due 12,000 currency units at a cutoff and the operator has 8,000 in usable incoming funds. The gap is 4,000. A timely 5,000-unit committed facility covers that gap. If 2,000 of the expected funds subsequently prove irrecoverable, the operator still owes the facility provider. The agreement determines who ultimately bears the 2,000 loss. In a stress scenario, if inflows available by the cutoff fall to 5,000, the gap is 7,000 and the facility leaves 2,000 unfunded. The amounts are hypothetical.

A stablecoin may carry approved payouts. Track the time until proceeds are usable, including conversion and withdrawal where relevant. Compare the same deposit and payout policies on conventional rails. The trial does not require a governance token or an internal claim on a thinly traded asset.

4. How to evaluate whether entry actually improves

Compare an existing refundable deposit with deposit-free entry at comparable fee and payout terms. If fees or payout limits must change, record those changes and separately estimate their effect where design permits. Measure registration, first completed sale, sustained use, provider working-capital costs, payout failures, realized losses and any movement to slower payout schedules. Include merchants that decline the offer and distinguish initial sign-ups from active use. A phased or randomized offer can support evaluation where feasible.

The adoption hypothesis predicts a larger response among merchants with limited cash buffers and uncertain sales, provided their ongoing charges and access to payouts remain acceptable. The risk hypothesis predicts that lower deposits can coexist with reliable settlement when funding covers stressed timing gaps and loss-bearing arrangements remain credible. Report results by merchant size, and compare whether added fees or payout delays offset the benefit to small merchants. This paper reports no empirical estimates.

5. Relationship to earlier papers

Who Controls Stablecoin Payment Networks? examines bargaining power between issuers and distribution platforms. This paper studies the merchant's decision to join and the operator's exposure after it does. Can Portable Reputation Improve Supplier Finance? asks what trade evidence tells a lender about an invoice. Here the core question is how to fund payouts when a merchant no longer posts an entry deposit. The earlier voucher paper evaluates eligibility rules at checkout. This paper measures participation and settlement reliability when the conditions for merchants to join change.

Keywords

Merchant onboarding, deposit-free merchant entry, stablecoin payments, settlement liquidity, prefunding, payment network adoption, loss allocation.

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