

USDx: A Next-Generation Institutional-Grade Synthetic Stablecoin Based on NAV Redemption

Orbis Labs

June 1, 2026

Abstract

This paper presents and formally analyzes USDx, a synthetic stablecoin protocol for project teams in the stable coin ecosystem. USDx targets a peg of 1 USDT and is backed by a protocol treasury that holds two assets, USDT and BOX (and other mainstream coins). Its core innovation is NAV-based redemption: when treasury value is at least the circulating face value, USDx redeems 1:1 at par; when it falls below, redemption automatically switches to a pro-rata share of treasury assets.

The paper makes three contributions. First, it gives a complete mathematical model of the protocol and proves no-overpayment, NAV neutrality, and composition invariance in discount mode. Second, it derives the dynamics and steady state of the collateral ratio: with a constant BOX price and no redemptions, a single minting cohort enters discount mode from day 126; for the protocol as a whole to keep a collateral ratio of at least 100% over the long run, minting inflows must grow at roughly 24.3% per month. Third, it identifies the predictable dilution caused by vesting releases during discount periods, and the early-redemption incentive this creates, and proposes three mechanism improvements: fully diluted NAV, dynamic stabilizer pricing, and a conservative mark price.

Keywords: stablecoin; NAV-based redemption; fractional reserve; minting premium; reflexivity; mechanism design; DeFi

1 Introduction

1.1 Background

Stablecoins have become the settlement layer of the on-chain economy. Existing designs face a well-known trilemma among safety, decentralization, and capital efficiency. Fiat-reserved stablecoins (e.g., USDT, USDC) are safe but depend on centralized custody and create no endogenous value for any particular ecosystem. Over-collateralized crypto stablecoins (e.g., DAI) are decentralized but capital-inefficient. Fractional-reserve and algorithmic designs are capital-efficient, yet the Iron Finance collapse in 2021 and the Terra collapse in 2022 exposed their death spiral: falling confidence, a run, collateral liquidation, and a further price decline.

1.2 Problem Statement

For an ecosystem stablecoin, the question is: can one design a stablecoin whose reserves partly consist of an ecosystem token, creating endogenous demand, while never becoming insolvent (liabilities exceeding assets) in any market state, and whose exit rules are fair and predictable for all holders?

1.3 Contributions and Structure

USDx’s answer is to give up the promise of “1:1 redemption at all times” in favor of the promise of “deterministic rules at all times.” Building on the protocol’s original design document, this paper adds formal modeling, dynamic analysis, and improvement proposals.

Section 2 reviews related work; Section 3 sets out the system model; Sections 4–6 analyze the minting, redemption, and secondary-market mechanisms; Section 7 analyzes the economic model; Section 8 presents the technical architecture; Section 9 covers risk analysis and stress testing; Section 10 discusses the multi-asset treasury extension; Section 11 covers regulatory positioning and conclusions.

2 Related Work

2.1 A Taxonomy of Stablecoins

By source of value backing, stablecoins fall into four types (Table 1). The core difference among them is what guarantees the redemption promise.

Table 1: A taxonomy of stablecoins

Type	Examples	Redemption guarantee	Main risk
Fiat-reserved	USDT, USDC	Off-chain cash and short-term Treasuries	Custody and counterparty risk
Over-collateralized crypto	DAI	On-chain over-collateralization and liquidation	Liquidation spirals, low capital efficiency
Fractional / algorithmic	Early FRAX, IRON, UST	Reserves plus governance-token mint/burn	Reflexive death spiral
NAV-redemption	USDx (this paper)	Pro-rata claim on treasury assets	Peg may stay below 1 for long periods

2.2 Failures and Evolution of Fractional-Reserve Designs

Gorton and Zhang [2] liken stablecoins to the private banknotes of the U.S. Free Banking Era in the 19th century and argue that they face the same run fragility as banks. Klages-Mundt and Minca [3] show that stablecoins collateralized by endogenous tokens are subject to deleveraging spirals when demand falls.

Iron Finance (June 2021) was partly collateralized by USDC and its governance token TITAN, whose price went to near zero during the run. Terra (May 2022) relied on mint/burn arbitrage between UST and LUNA, and roughly USD 40 billion of combined UST and LUNA market value vanished within days [4]. What the two share is that redeemers exited at par while losses fell on those who stayed and on governance-token holders, creating a first-mover incentive to run. FRAX, for its part, raised its collateral ratio to 100% by governance vote in 2023, effectively abandoning its fractional-algorithmic design.

2.3 Intellectual Roots of NAV-Based Redemption

USDx’s discount mode borrows from NAV redemption in open-ended funds: each share can only exit at the fund’s net asset value, so the fund cannot become insolvent. It differs from a money market fund “breaking the buck” (as the Reserve Primary Fund did in 2008) in that USDx writes this case into its rules and executes it automatically rather than handling it ad hoc. The bank-run model of Diamond and Dybvig [1] shows that removing the first-mover advantage is the key to preventing runs; this is the theoretical basis for the NAV-neutral design.

3 System Model

USDx consists of six components deployed on BNB Smart Chain: the minting contract, the treasury, the vesting contract, FeeLocker, the stabilizer, and the secondary pool. Table 2 defines

the notation used throughout.

Table 2: Notation

Symbol	Meaning	Value
D	Total deposit value of one mint (in USDT)	—
k	Minting multiplier	1.2 (fixed)
a	Share of deposit credited immediately	0.4
b	Share of deposit locked	0.8
r	Daily release rate (of initial lock)	0.3%
f	Redemption fee	0.5% (governance-adjustable)
U, B	Treasury USDT and BOX quantities	State variables
P	BOX mark price (24h TWAP)	State variable
T	Total treasury value	$T = U + P \cdot B$
S	Redeemable circulating supply (on-chain total supply)	State variable
L	Unreleased locked entitlements	State variable
d	Discount factor	$d = T/S$

A USDX holder does not hold a fixed claim on 1 USDT but a share of the treasury capped at face value. The redemption value of one USDX is

$$v = \min\left(1, \frac{T}{S}\right). \quad (1)$$

This definition is the key to every property that follows: when the treasury is sufficient, USDX behaves as a stablecoin; when it is not, USDX behaves as a fund share.

4 Minting Mechanism

4.1 Dual-Asset Equal-Value Deposits

Project teams must deposit USDT and BOX of equal value, each 50% of the deposit; single-sided minting is not supported. BOX is valued at the mark price P , the 24-hour time-weighted average price (TWAP) of the permanently locked BOX/USDT pool. The protocol does not swap into BOX on the depositor’s behalf.

4.2 Deposit Allocation

For a deposit worth 1,000 USDT (500 USDT + 1,000 BOX at a BOX price of 0.5 USDT), funds are allocated as shown in Table 3.

Table 3: Allocation of a 1,000 USDT deposit

Destination	USDT side	BOX side	Purpose
Treasury	350 (70%)	700 (70%)	Redemption reserve
Locked LP	100 (20%)	200 (20%)	Permanently locked by FeeLocker
Stabilizer	25 (5%)	—	1:1 swap reserve
Marketing	25 (5%)	—	Ecosystem operations
Burn	—	50 (5%)	BOX deflation
Shares	—	50 (5%)	Ecosystem distribution

The treasury receives 70% of each deposit’s value, of which the USDT portion, 35%, forms a “hard floor” that does not move with BOX.

4.3 The 1.2x Minting Premium and Vesting

Each 1 USDT of deposit value creates 1.2 USD_X of allowance. Of this, 0.4 is credited immediately; 0.8 is recorded in the contract as an “unminted entitlement” and released daily at 0.3% of the initial lock (2.4 USD_X per day per 1,000 deposited), fully released on day 334. The cumulative amount credited is

$$c(t) = a + \min(b, b r t) = 0.4 + \min(0.8, 0.0024 t). \quad (2)$$

Locked entitlements cannot be redeemed, transferred, or withdrawn early. If they could be cashed out early without loss, anyone could capture the 20% premium risk-free at the expense of all holders (see Section 7.3).

4.4 FeeLocker Permanent Liquidity

20% of each deposit is added to the BOX/USDT pool, and the LP position is held permanently by the FeeLocker contract. The contract is non-upgradeable and has no code path for withdrawing principal, so the principal is economically equivalent to burned; anyone can call `collect()` to send fees to the platform address. Every USD 1 million of deposits adds about USD 200,000 of two-sided depth to the pool, a commitment verifiable by auditing the on-chain bytecode.

Note that the locked LP is not a treasury asset: it is not counted in T and provides no direct backing for USD_X redemptions. Its role is to deepen the BOX market, indirectly lowering the cost of liquidating BOX received in redemptions.

5 Redemption Mechanism

5.1 Mode Determination

Redeemed USD_X is burned in full, and the treasury pays out USDT and BOX directly, with no automatic swap. The mode test depends only on treasury state and never references any secondary-market price of USD_X: when $T \geq S$ the protocol is in normal mode and redeems at par; when $T < S$ it is in discount mode and redeems pro rata.

5.2 Normal Mode

For a redemption of q , the treasury splits out a two-asset basket worth q in proportion to the values of U and $P \cdot B$. The user receives value $(1 - f)q$ and the platform collects $f q$. After redemption, T and S both fall by q , so the treasury surplus $T - S$ is unchanged.

5.3 Discount Mode

The user receives a q/S share of each of the treasury’s U and B . Net of the fee f , the value received is

$$V_{\text{user}} = (1 - f) \cdot \frac{q}{S} \cdot T = (1 - f) \cdot d \cdot q. \quad (3)$$

The two modes pay the same amount at the boundary $T = S$, so the switch is continuous and has no exploitable jump.

Worked example. The treasury holds 6,000 USDT and 100,000 BOX ($P = 0.05$), so $T = 11,000$, $S = 12,000$, and $d \approx 0.917$. A user redeeming 1,200 USD_X (10% of supply) receives 597 USDT and 9,950 BOX, worth about 1,094.5 USDT at the mark price.

5.4 Three Properties

Proposition 1 (No overpayment). *In discount mode a single redemption pays out no more than a q/S share of the treasury; if all USDX is redeemed, the treasury is emptied exactly, with no stranded assets and no residual liabilities.*

Proposition 2 (NAV neutrality). *Assuming the platform fee is deducted from the redemption proceeds and leaves the treasury, the per-unit NAV after redemption is*

$$v' = \frac{T(1 - q/S)}{S - q} = \frac{T}{S} = v. \quad (4)$$

The order of redemptions therefore does not affect the NAV of those who stay, removing the first-mover advantage of a traditional run.

Proposition 3 (Composition invariance). *In both modes U and B fall in the same proportion, so the treasury’s USDT/BOX quantity ratio is unchanged and USDT cannot be drained one-sidedly.*

5.5 No Market-Triggered Circuit Breakers

The protocol sets no daily redemption limit and has no circuit breaker triggered by BOX price drops or redemption volume. The contracts keep a multisig-controlled pause switch for security incidents only, such as contract bugs or oracle failures. Propositions 1–3 are the mathematical basis for not needing circuit breakers at the treasury level; however, Section 7.4 shows that Proposition 2 holds only within a single redemption with S fixed, and that vesting releases break it over time.

6 Secondary Market and Stabilizer

6.1 Secondary Liquidity

The USDX/USDT secondary pool uses a StableSwap-NG curve [5] (amplification coefficient $A = 25$) with a 0.05% LP fee that goes to LPs. The protocol continuously and one-directionally injects 30% of its “automated revenue” (redemption fees plus locked-LP fees) into the stabilizer, and offers a USDT + USDX dual-token yield product to attract liquidity providers.

6.2 The Stabilizer

The stabilizer is a standalone contract offering 1:1 fixed-price swaps between USDX and USDT. Buying (USDT $\rightarrow$ USDX) is free; it first matches queued sell orders and tops up from pool inventory, without minting new USDX. Selling has two options: an instant fill at a fixed 0.5% fee, or a queued order whose fee decays linearly from 0.5% to 0.1% over 24 hours. Queued orders fill FIFO from available reserves, can fill partially, and can be claimed or cancelled at any time; cancelling and re-queuing resets the timer. The design sorts users by price signal: those in a hurry pay more to exit now, while patient users wait for reserves to build up.

6.3 Exit Cost Ladder

Table 4: Exit routes and their costs

Route	Fee	Assets	Speed	Use case
Secondary pool	0.05% + slippage	USDT	Instant	Small, frequent
Stabilizer, queued	0.5% $\rightarrow$ 0.1%	USDT	Depends on reserves	Not urgent, pure USDT
Stabilizer, instant	0.5%	USDT	Instant (if reserves suffice)	Urgent
Treasury redemption	0.5%	USDT + BOX	Instant	Large, accepts two assets

6.4 Arbitrage Bounds on the Peg

In normal mode, when the secondary price is below 1, arbitrageurs can buy USD_X, redeem it with the treasury for a two-asset basket worth 0.995, and sell the BOX portion. The lower bound on price is therefore about 0.995 minus the slippage cost of selling BOX; when the secondary price is above 1, the stabilizer’s free buy channel sets the upper bound.

6.5 A Stabilizer Flaw in Discount Mode, and a Fix

The stabilizer pays 1:1 in every mode, while in discount mode the treasury pays only $d < 1$. When $d < 0.995$, rational holders will sell USD_X to the stabilizer first, and its reserves will be drained quickly by those who arrive first. This reintroduces a first-mover advantage at the stabilizer level.

Recommendation. Set the stabilizer’s sell price to $\min(1, d)$ less fees, tying it to treasury redemption. The stabilizer then remains a 1:1 backstop in normal times and becomes equivalent to treasury redemption in discount periods, so it no longer serves as an exit for a run.

7 Economic Model Analysis

The conclusion of this section: with a constant BOX price and no external revenue, USD_X’s long-run collateral ratio converges to 58.3%; sustaining par redemption depends on one of three things: continued new minting, BOX appreciation, or external revenue flowing into the treasury.

7.1 Collateral Ratio Dynamics of a Single Cohort

After a single deposit, treasury value stays at $0.7D$ while circulating supply grows with vesting, so the collateral ratio is

$$CR_t = \frac{0.7}{0.4 + \min(0.8, 0.0024t)}. \quad (5)$$

CR is 175% on the day of minting, about 113.6% on day 90, and 99.7% on day 126, after which the cohort is in discount territory; once fully vested on day 334 it is 58.3%. In other words, even with a completely flat BOX price, an isolated minting cohort naturally falls below par after about four months.

7.2 Steady-State Collateral Ratio and Growth Dependence

Suppose minting deposits flow in continuously at a compound monthly growth rate g , so cohorts sit at different vesting stages. The protocol-wide long-run collateral ratio is total treasury value over total circulating supply. Numerical results with a constant BOX price are shown in Table 5.

Table 5: Long-run collateral ratio by deposit growth rate

Monthly deposit growth g	Long-run collateral ratio
0%	58.3%
5%	68.8%
10%	78.4%
20%	94.4%
24.3%	100.0%
30%	106.3%

For the protocol as a whole to stay in normal mode over the long run, deposits must grow at a compound rate of roughly 24.3% per month. Without growth, BOX would need to rise about 143% from its minting price, satisfying $0.35 + 0.35x \geq 1.2$. This growth dependence is the property of the design that most needs full disclosure to participants.

7.3 No-Arbitrage Constraint on Early Unlocking

Consider an attack: after minting, redeem the immediately credited portion at par, and cash out the locked portion early through some channel at a haircut x . The recovery per 1 USDT deposited is $0.4 + 0.8(1 - x)$. Requiring this to be at most 1 gives $x \geq 25\%$. Any future accelerated-unlock channel (staking, tasks, etc.) must therefore carry a combined haircut of at least 25%.

7.4 Vesting Dilution and the Intertemporal Run Incentive

Proposition 2 guarantees that a single redemption does not affect others’ NAV, but vesting releases keep increasing S while T stays the same. In discount mode, d therefore declines predictably day by day. For a single cohort with BOX down 50%, d is about 0.597 on day 200, about 0.513 on day 260, and 0.4375 on day 334.

Because future dilution is certain, rational holders will redeem as early as possible to lock in the day’s higher d . This reintroduces a first-mover advantage over time and concentrates selling pressure on BOX. This paper proposes two alternative fixes:

1. **Option A: fully diluted NAV.** In discount mode, redeem at $d = T/(S + L)$, counting unreleased entitlements in the denominator. Future releases no longer change d , so waiting and redeeming now are equivalent; the cost is a slightly lower payout today.
2. **Option B: pause vesting in discount mode.** Suspend releases while $T < S$ and resume once normal mode returns. This protects existing holders but changes the release promise made to minters, and must be disclosed clearly before minting.

7.5 Reflexivity

About half of treasury value is BOX, and redemptions pay BOX directly to users. Redeemers who sell BOX push P down, lowering T and d : a weaker form of reflexive loop. Unlike Terra, USDX never mints new BOX to meet redemptions, so the loop cannot run away through unlimited issuance, and the permanent depth accumulated by FeeLocker absorbs some of the selling. Where BOX depth is limited, however, the loop can still drive d down quickly.

8 Technical Architecture

USDX is deployed on BNB Smart Chain and consists of six protocol contracts and one external price source; the treasury is the only module bearing redemption obligations (Figure 1).

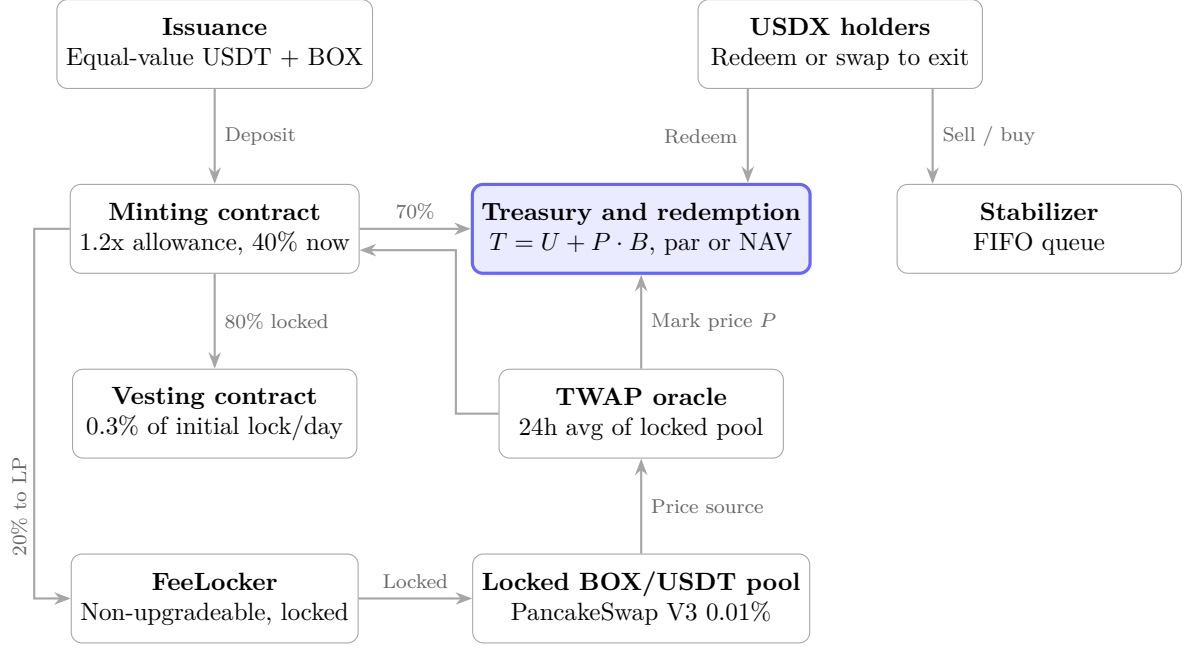


Figure 1: USDX contract architecture: nine modules and fund flows. Funds enter via the minting contract; holders exit via the treasury or the stabilizer.

The minting contract also sends 5% of USDT each to the stabilizer and the marketing wallet, burns 5% of BOX, and allocates 5% of BOX to Shares; these flows are omitted from the diagram.

8.1 Contract Modules

Table 6: Contract modules

Module	Responsibility	Upgradeability
Minting contract	Validates equal-value two-asset deposits, prices via TWAP, allocates funds, records locked entitlements	TBD
Vesting contract	Releases 0.3% of the initial lock daily; entitlements non-transferable	TBD
Treasury and redemption	Holds U and B , determines mode, pays at par or NAV, burns USDX	TBD
Stabilizer	1:1 swaps, FIFO orders, linearly decaying fees	TBD
FeeLocker	Holds the LP position permanently; <code>collect()</code> sends out fees	Non-upgradeable
TWAP oracle	Reads the locked pool's 24-hour average price	TBD

8.2 Oracle Design

The mark price P comes solely from the locked pool's 24-hour TWAP. This resists single-block flash-loan manipulation but has two weaknesses. First, the average lags spot: when BOX falls sharply and spot is below TWAP, a minter can buy BOX cheaply on the market, deposit it at the inflated TWAP, and extract extra USDX. Second, a single pool has limited depth, so manipulation sustained over several hours may cost less than it earns.

Recommendation. On the minting side use $\min(\text{spot}, \text{TWAP})$, and on the redemption side compute the BOX quantity with $\max(\text{spot}, \text{TWAP})$, always taking the valuation conservative to the protocol. Add independent quotes such as Chainlink or Binance Oracle as a deviation check, pausing minting when deviation exceeds a threshold.

8.3 Permissions and Security

The multisig holds only the operational pause right, and the contracts should restrict which functions can be paused and for how long. Before launch, we recommend at least two independent audits, public disclosure of multisig members and threshold, public verification of all contract source code after deployment, and module-by-module disclosure of upgradeability (the “TBD” items in Table 6 need confirmation from the project team).

9 Risk Analysis and Stress Testing

9.1 Stress Test

Under the least favorable baseline, with all locks released and no new deposits, the discount factor d depends only on the change δ in BOX price relative to minting:

$$d = \frac{0.35 + 0.35(1 - \delta)}{1.2}. \quad (6)$$

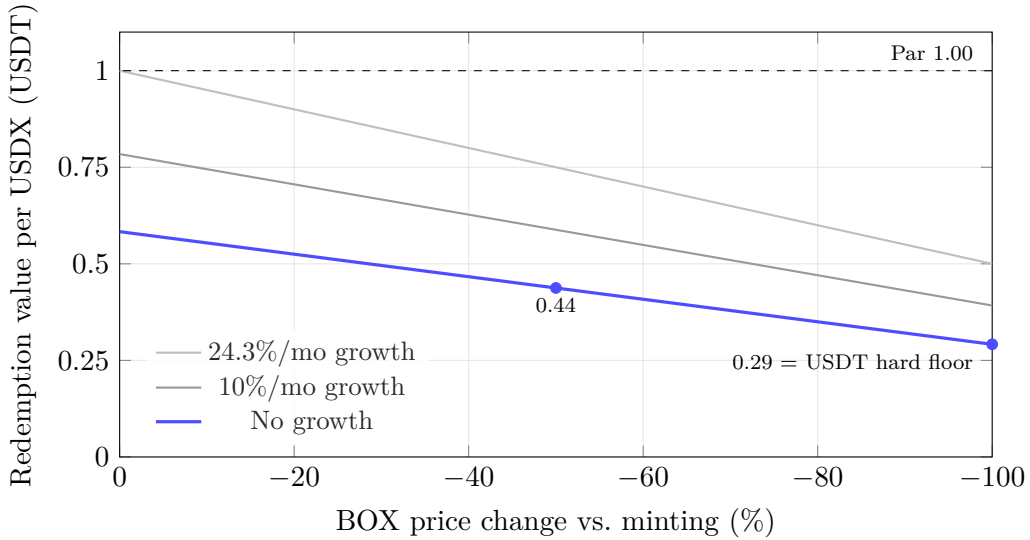


Figure 2: With no deposit growth, a 50% BOX drop cuts each USDX payout to about 0.44 USDT. Values assume all locks released and exclude the 0.5% redemption fee; growth scenarios use the steady-state ratios of Table 5.

Deposit growth only raises the starting point of each curve; it cannot change how steeply the curve falls as BOX declines. In no scenario does d fall below the USDT hard floor of 0.292, a direct corollary of Proposition 1 and the fundamental difference between USDX and Terra-style designs.

9.2 Risk Register

Table 7: Risk register

Risk	Trigger	Existing mitigation	Recommended addition
Structural discount	Minting premium drives long-run collateral ratio to 58.3%	NAV redemption, no insolvency	Public real-time d dashboard; disclose growth dependence
Intertemporal run	Predictable vesting dilution in discount periods	None	Fully diluted NAV or pause vesting in discount mode (Sec. 7.4)
Stabilizer run	Still pays 1:1 in discount periods	FIFO queue and fee sorting	Tie sell price to $\min(1, d)$ (Sec. 6.5)
Oracle manipulation	Single-pool TWAP, lags spot	24h average	Conservative pricing and external quote checks (Sec. 8.2)
BOX reflexivity	BOX received in redemptions is sold	FeeLocker permanent depth	Monitor ratio of BOX depth to redemption volume
Contracts and permissions	Bugs or multisig abuse	Pause switch for security incidents only	Multiple audits, timelock, bug bounty

9.3 Important Notice

USDx is not a fully fiat-reserved stablecoin and does not promise rigid 1:1 redemption under all circumstances; in extreme cases it redeems at NAV, and holders may suffer significant losses. This paper does not constitute investment advice.

10 Multi-Asset Treasury Extension and Roadmap

10.1 Design Goals

Today the treasury’s non-USDT portion is entirely BOX, and this concentration is the root of reflexivity risk. The extension keeps the 50% USDT share unchanged and turns the other 50% into a basket: BOX, BTC, ETH, BNB, and vetted project tokens with on-chain verifiable positive cash flow.

10.2 Haircut-Weighted Treasury Value

Introduce a haircut h_i for each asset i ($0 < h_i \leq 1$, lower for higher volatility and thinner depth), so that treasury value becomes

$$T = U + \sum_i h_i P_i B_i. \quad (7)$$

Mode determination and the discount factor both use the haircut T , so d is a conservative estimate of treasury value; any realizable value above T serves as a buffer.

10.3 Admission and Concentration Rules

1. Cap each non-USDT asset’s share of treasury value, BOX included, to structurally limit reflexivity.
2. Cash-flow tokens must have revenue verifiable on-chain, secondary-market depth above a minimum standard, audited contracts, and an independent price source.
3. BTC, ETH, and BNB use mainstream feeds such as Chainlink; long-tail assets use TWAP with lower h_i .

4. Discount-mode redemption still pays a pro-rata in-kind share of the entire basket, and Propositions 1–3 hold for any number of assets; a minimum redemption size can limit fragmentation and gas costs.

Note that BTC, ETH, and BNB are highly correlated in a crisis: diversification reduces BOX-specific risk but cannot eliminate systemic drawdowns. Some cash-flow tokens may also be deemed securities in certain jurisdictions, so legal opinions are needed before admission.

10.4 Roadmap

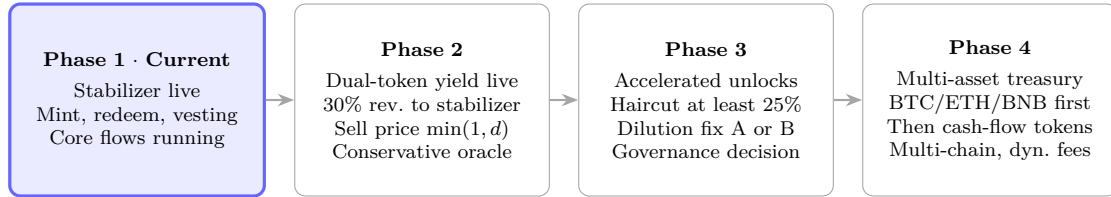


Figure 3: USDx roadmap: four phases in sequence, with the multi-asset treasury last. Phase order is fixed; no dates are set yet.

Phases 2 and 3 implement the mechanism improvements in Sections 6.5, 7.4, and 8.2; Phase 4 builds on them to introduce the multi-asset treasury.

11 Regulatory Positioning and Conclusion

11.1 Regulatory Positioning

Payment-stablecoin rules in major jurisdictions generally require full 1:1 reserves in highly liquid assets such as cash and short-term Treasuries: the stablecoin provisions of the EU’s Markets in Crypto-Assets Regulation (MiCA) [8] have applied since June 2024, the U.S. GENIUS Act [9] was signed in July 2025, and Hong Kong’s Stablecoins Ordinance [10] took effect in August 2025. Because USDx holds crypto-asset reserves and does not promise rigid redemption, it is unlikely to qualify as a compliant payment stablecoin under these frameworks and is closer to an on-chain asset-share product.

We recommend that the project team obtain professional legal advice, before publishing this white paper, on the jurisdiction of the issuing entity, the jurisdictions of target users, and the legal nature of USDx and of the cash-flow tokens, and avoid wording in external materials that implies principal protection or guaranteed redemption. This is general information, not legal advice; rules may have changed, and the latest official texts prevail.

11.2 Conclusion

By replacing a rigid redemption promise with NAV-based redemption, USDx mathematically rules out insolvency at the treasury level and, through NAV neutrality, removes the first-mover advantage within a single redemption. This is a substantive improvement over fractional-reserve stablecoins.

The analysis also shows that its peg is not unconditional. The 1.2x minting premium drives the long-run collateral ratio to 58.3%, so maintaining par redemption depends on about 24.3% monthly deposit growth, BOX appreciation, or external revenue. Vesting dilution during discount periods and the stabilizer’s 1:1 pricing reintroduce run incentives across time and across exit channels. The four improvements proposed here (fully diluted NAV, dynamic stabilizer pricing, a conservative mark price, and a multi-asset treasury) can materially strengthen the protocol without changing its core design.

References

- [1] Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. *Journal of Political Economy*, 91(3), 401–419.
- [2] Gorton, G. B., & Zhang, J. Y. (2023). Taming wildcat stablecoins. *University of Chicago Law Review*, 90(3).
- [3] Klages-Mundt, A., & Minca, A. (2021). (In)stability for the blockchain: Deleveraging spirals and stablecoin attacks. *Cryptoeconomic Systems*, 1(2).
- [4] Liu, J., Makarov, I., & Schoar, A. (2023). Anatomy of a run: The Terra Luna crash. NBER Working Paper No. 31160.
- [5] Egorov, M. (2019). StableSwap: Efficient mechanism for stablecoin liquidity. Curve Finance.
- [6] Adams, H., Zinsmeister, N., Salem, M., Keefer, R., & Robinson, D. (2021). Uniswap v3 Core.
- [7] MakerDAO. (2020). The Maker Protocol: MakerDAO’s multi-collateral Dai (MCD) system.
- [8] European Union. (2023). Regulation (EU) 2023/1114 on markets in crypto-assets (MiCA).
- [9] United States Congress. (2025). Guiding and Establishing National Innovation for U.S. Stablecoins Act (GENIUS Act).
- [10] Hong Kong SAR. (2025). Stablecoins Ordinance.