

Summary

Given the recent sUSD depeg, Chaos Labs provides our analysis and immediate recommendations to mitigate risk on the protocol.

Overview

sUSD depegged on May 16, 2024, with its price reaching a low (as of this writing) of 0.915 relative to USDC. This depeg was a result of a large sBTC/wBTC liquidity provider withdrawing, using Synthetix's spot synth redemption to acquire sUSD, and selling the sUSD in the relevant Curve pool.

Incident Breakdown

On April 29th, 2024, in accordance with [SIP-2059](#), Synthetix fully deprecated non-sUSD spot synths on the Ethereum mainnet. As a result, atomic exchanges for assets like sETH and sBTC were discontinued, with users being required to redeem these synths for sUSD.

A relatively dormant [address](#) deposited 87 BTC in the sBTC/wBTC Curve pool over the course of several months in 2023. This pool's liquidity was heavily concentrated, with three accounts providing the majority of liquidity, including this initial user.

As a result, 9 days ago, one of these addresses [called](#) `remove_liquidity_one_coin`

in WBTC (as well as another calling `remove_liquidity`

followed by a sBTC-WBTC swap within the pool), effectively performing a swap of sBTC for wBTC, leading to a sBTC depeg to .93-.94. This was subsequently [arbitraged](#) by searchers with a different sBTC pool, leading to a convergence 0.96 sBTC/wBTC, where it has remained until today.

The original depositor then [withdrew](#) their large share of the pool, receiving 70 sBTC and 16 WBTC, due to the ongoing depeg and the need to redeem. This left the sBTC/wBTC pool (and the other sBTC pool) with minimal exit liquidity for his sBTC. Thus, the user [redeemed his sBTC to sUSD](#), receiving 4.48M.

During the 14 hours between redeeming sBTC and obtaining the sUSD, the user swapped USDC and crvUSD for wBTC to approximately maintain some of their initial BTC exposure. After receiving sUSD, they periodically sold it for USDC/T within the sUSD curve pool, which led to a depeg to .93.

The user still owns 1.76M sUSD, which may be sold if and when the price reverts. Given the current discount, we note that there is an incentive to repay sUSD debt on Synthetix, as the asset is hard coded to \$1 within the protocol. However, this has not happened yet.

sUSD Exposure on Aave

sUSD is listed on Aave V3 Optimism as a collateral asset and Aave V2 Ethereum as a frozen, non-collateral asset.

Chain

Current Supply

Supply Cap

Current Borrows

Borrow Cap

Utilization

Borrowed Against (\$)

E-Mode Borrowed Against

LT

E-Mode LT

Optimism V3

9,560,000

20,000,000

4,450,000

13,000,000

46.45%

3,130,000

2,950,000

75.00%

95.00%

Ethereum V2

2,190,000

Frozen

1,020,000

Frozen

46.57%

-

-

-

-

Overall

11,750,000

-

5,470,000

-

46.52%

3,130,000

2,950,000

-

-

Beginning from May 7th, we can see that nearly 5M sUSD have been deposited, 1.57M of which was deposited in a single [transaction](#) as the depeg accelerated.

Overall, the sUSD market on Optimism has deleveraged since May 7th, with 8.6M sUSD deposited and repaid, relative to 3.6M borrowed and 1.4M withdrawn. We note that borrowers are incentivized to repay their debt when sUSD's price is below \$1, given that that is where they borrowed the asset.

Liquidations

Liquidations have thus far been minimal, totaling just 2,398 sUSD, with the largest being \$1.38K USDC.[repaid](#) to liquidate \$1.39K sUSD.

Next Steps

- Temporary

Freeze of the sUSD reserve on Aave V3

Optimism

- as a precautionary measure, and given the ongoing depeg and the size of the market, we recommended the Aave Guardian freeze the sUSD Optimism V3 market as an immediate step to prevent any additional growth or leverage.
- Future Parameter Updates:

We will follow up with further recommendations on sUSD parameters, including LT, LTV, supply/borrow caps, and stablecoin E-Mode parameters.