Simple Summary

A proposal to adjust nine (9) total risk parameters, including Loan-to-Value, Liquidation Threshold, and Liquidation Bonus, across four (4) Aave V3 Arbitrum assets.

Motivation

Chaos Labs' Parameter Recommendation Platform runs hundreds of thousands of agent-based off-chain and on-chain simulations to examine how different Aave V3 risk parameters configurations would behave under adverse market conditions - and find the optimal values to maximize protocol borrow usage while minimizing losses from liquidations and bad debt.

Note: As a general guideline, we limit the proposed changes by ±3% for all parameters as a high/low bound for a given proposal. This ensures more controlled changes and allows us to analyze their effect on user behavior before recommending further amendments to the parameters if the optimal configuration is outside this range.

Please find more information on the parameter recommendation methodology here.

You can also view the simulation results and breakdown for the different assets by clicking on them on this page.

The output of our simulations reveals an opportunity to increase LTVs and LTs for WBTC, WETH, USDC, and DAI on V3 Arbitrum, resulting in improved capital efficiency of the system, with a negligible effect on the projected VaR (95th percentile of the protocol losses that will be accrued due to bad debt from under-collateralized accounts over 24 hours) and EVaR (Extreme VaR, the 99th percentile of the protocol losses that will be accrued due to bad debt from under-collateralized accounts over 24 hours)

Simulating all changes jointly yields a projected borrow increase of ~$510,000, with no increase in VaR and Extreme VaR compared to simulations with the current parameters.

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Liquidity and Position Analysis:

Generally, the TVL in Aave on Arbitrum (98M$) compared to the overall chain trading volume (~$142M /daily over the past three months) should allow on-chain liquidity sources to absorb liquidations across the Arbitrum positions.

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Source: [DeFiLlama](#)

As a result, Aave protocol on Arbitrum is expected to experience very low bad debt, even in extreme market conditions, across most assets. Specifically, the current values of LT and LTV for multiple assets can be safely increased to improve capital efficiency at a very low or no additional bad debt risk due to price volatility. This assumption is backed by simulation sweeps across a large range of values, measuring low Extreme Value-at-Risk (P99 bad debt) value even as LT is increased significantly.

WETH and WBTC

We have not identified any "whale" positions or activity affecting our recommendations.

USDC

We have identified two large positions that supply ~45% of USDC on Arbitrum. One of these wallets does not borrow against its $7.63M USDC position.

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Source: [Chaos Risk Dashboard](#)

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Source: [Chaos Risk Dashboard](#)

Even in the event of a change in the borrow usage (increasing disproportionately), the on-chain liquidity for USDC on Arbitrum should support its liquidation potential.

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DAI

We have identified one large position which supplies ~40% of DAI on Arbitrum and does not currently borrow against the position.

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Source: [Chaos Risk Dashboard](#)

Even in the event of a change in the borrow usage (increasing disproportionately), the on-chain liquidity on Arbitrum should be able to support its liquidation potential.

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Recommendations

Asset

Parameter

Current

Recommended

Change

WETH

Liquidation Threshold

82.5%

85%

+2.5%

WETH

Loan-to-Value

80%

82.5%

+2.5%

WBTC

Liquidation Threshold

75%

78%

+3%

WBTC

Loan-to-Value

70%

73%

+3%

WBTC

Liquidation Penalty

10%

7%

-3%

DAI

Liquidation Threshold

80%

82%

+2%

DAI

Loan-to-Value

75%

77%

+2%

USDC

Liquidation Threshold

85%

86%

+1%

USDC

Loan-to-Value

80%

81%

+1%

+1%