Simple Summary

A proposal to increase the supply cap for sAVAX on Avalanche V3.

Motivation

In this proposal, Chaos Labs recommends increasing the supply cap for sAVAX on Avalanche V3, which has reached 100% utilization.

sAVAX Oracle

The sAVAX oracle on Aave is unique in implementation. The custom-built oracle adapter 'attaches itself' to two contracts to calculate the price for sAVAX.

- Half of the price is derived from the AVAX-USD Chainlink feed

- Half of the price is derived from the sAVAX contract. Unlike rebasing tokens (i.e., Aave's aTokens), sAVAX accumulates the underlying yield of staking AVAX and distributes the yield to sAVAX holders via the exchange rate.

This composition of the sAVAX oracle means that its price will always be equal to or higher than that of AVAX.

E-Mode Liquidations

- The majority (83%) of sAVAX is lent within E-mode.

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sAVAX

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- Given that the oracle will only show increasing prices compared to AVAX, it is unlikely for a lender to get liquidated in the leveraged loop on the correlated E-mode.
- There is a theoretical possibility of liquidation due to interest rate payments on the loan. However, we do not think this poses a significant risk on account of the following:

- If Aave borrowing APY < sAVAX Staking APY, then the price appreciation is greater than IR payments, and no liquidation will take place

- If Aave borrowing APY > sAVAX Staking APY, then it will be unprofitable for sAVAX holders to borrow AVAX against sAVAX, as they'd rather simply unstake their AVAX.

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Non E-Mode Liquidations

Outside of E-mode, with the liquidation bonus set at 10%, liquidators may choose to seize sAVAX if an account's health dips below one and sell off the sAVAX with a higher profit margin than other collateral. In the past 90 days, we have seen 19 liquidations of a total amount of ~$2,000

the y-axis represents the value liquidated in USD

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Source: [Chaos Labs](#)

The majority of liquidity for sAVAX is on Platypus Finance. A single swap of 145,000 sAVAX incurs slippage lower than the 10% liquidation penalty. On Trader Joe, there is additional liquidity of around 10% of the amount available on Platypus within the same price impact range.

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Platypus Finance

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Trader Joe

Conclusion

While in E-mode, given the characteristics of the sAVAX oracle, sAVAX-AVAX lenders/borrowers cannot face liquidation, pushing the risks primarily towards the sAVAX counter-party risk, i.e., sAVAX contract breaking or failing (audits of Benqi smart contracts - [link 1](#), [link 2](#), [link 3](#)).

Therefore, we mainly observe considerations of liquidity that will serve the liquidations of positions outside of E-mode.

Less than 20% of sAVAX is currently out of eMode, which is approximately the amount that can be liquidated profitably at once on Platypus and Trader Joe's.

While liquidity is not constant, we see across several observations that the liquidity available for sAVAX is maintained around these levels. Under the current risk parameters of 30% LT outside of E-mode, we assume that sAVAX collateral increase will distribute similarly and may lean even more towards E-mode positions than the current supply. Under this assumption, even when we increase the supply cap by 100%, there is still enough liquidity to profitably liquidate 50% of the total positions that may be liquidated (outside of E-mode).

With these defensive assumptions, we recommend increasing the supply cap to 2M sAVAX.

Recommendations

Asset

Current Supply

Current Supply Cap

Recommended Supply Cap

sAVAX

999,910

1,000,000

2,000,000

Disclaimer: Benqi is an existing customer of Chaos Labs' risk and optimization services which provides us further visibility and knowledge of risks related to sAVAX. That engagement is unrelated to work done for Aave, and they do not compensate us for asset listing or parameter modifications on any instance of Aave, but we have shared this proposal with them for initial feedback as we do with most projects interacting with the Aave protocol to ensure its accuracy.