

title: [ARFC] Avalanche wAVAX Interest Rate Upgrade

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Summary

@Llamaxyz presents a proposal to amend the wAVAX interest rate parameters on the Aave Avalanche v3 Liquidity Pool.

Abstract

Llama is working with Chaos Labs to revise the sAVAX risk parameters needed to enable more funds to flow into the recursive yield strategy sAVAX/wAVAX on Avalanche v3 Liquidity Pool. This proposal will focus on revising the AVAX interest rate parameters with the goal of improving the capital efficiency of the wAVAX reserve and increasing Aave's wAVAX revenue.

With a revised higher SupplyCap on sAVAX, we expect this to lead to an increase in the adoption of the recursive yield strategy. Increasing the availability of wAVAX supports the growth in TVL and revenue accruing to Aave with the sAVAX SupplyCap becoming the primary means limiting the adoption of the recursive yield strategy sAVAX/wAVAX.

Motivation

Llama has been in discussions with various parties to develop a yield curve that supports adoption of the recursive yield strategy sAVAX/wAVAX on Avalanche v3. The strategy is modelled to be attractive whilst the utilisation of the wAVAX reserve is less than the Uoptimal point.

Interest Rate at the Uoptimal point is calculated as shown below.

Base + Slope1 = $70\% \times (\text{LST Yield} + \text{sAVAX Deposit Incentives} / 2) / (98\% \times \text{sAVAX eMode LTV})$

Base + Slope1 = $70\% \times (7.2\% + 0.41\% / 2) / (98\% \times 92.5\%) = 4.72\%$

This approach reflects the following considerations:

- Deposit rewards on sAVAX significantly affect the profitability of the strategy by offsetting wAVAX borrowing costs
- Yield earned is sAVAX yield (7.2%) + deposit incentives (0.41%)
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- sAVAX deposit rewards are diluted with more deposits, ie: 50% growth in sAVAX deposits.
- Recursive strategy operates narrowly within the LTV of sAVAX eMode TVL
- 98% of the 92.5% LTV via Avax Correlated eMode
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- Recursive strategy is only attractive whilst generate supportive risk adjusted yield
- Looping 6 times generates around double the LST yield at Uoptimal utilisation, this is how the 70% figure is derived. This does not takes into consideration leverage transaction costs which could lead up to 1.5% of the principle and incur a 2-3 week break even period. It is assume users stay within the strategy for an extended period of time.
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The current recursive strategy sAVAX/wAVAX is generating around 23.9% with a low wAVAX utilisation due to the SupplyCap for sAVAX has been reached. This yield will fall as the wAVAX utilisation increases. Assuming the SupplyCap for sAVAX is doubled, the current wAVAX interest rate curve becomes the limiting factor on the profitability of the strategy. The SupplyCap on wAVAX has a utilisation of 24.35% and offers considerable deposit capacity. There was no BorrowCap for wAVAX at the time this proposal was drafted.

To reduce the volatility in the borrow rate between $0\% < \text{Utilization} < \text{Uoptimal}$, a Base of 1% is introduced whilst keeping the Base + Slope1 interest rate as calculated above. This generates a Slope1 of 4.72%.

Adjusting the Uoptimal parameter improved the capital efficiency of the AVAX reserve. Adjusting from 45% to 65% is a substantial increase. The current utilisation is a lot lower, 28.49% and is expected to increase substantially, possibly 56.98% when the sAVAX SupplyCap is to be doubled. This is still short of the 65% Uoptimal parameter and offers users an attractive yield on the strategy. With future SupplyCap increases, the Uoptimal parameter can be revised. With a Uoptimal of 65%, there remain sufficient liquidity in the reserve to liquidate users. It is also worth noting a \$5.055m USDC swap for wAVAX incurs a 2% price impact via 1inch.

The Slope2 parameter has been reduced from 300% to 144.28% to generate a borrow rate of 150% at 100% utilisation. This reduced the volatility when utilisation is in the Uoptimal < Utilisation < 100% range. When utilisation is in this range the recursive strategy is not generating sufficient reward relative to holding sAVAX and will lead to strategy reducing leverage and therefore utilisation of the wAVAX reserve. Because of this relationship a gradual increase in borrowing interest is preferable and thus a lower Slope2 parameter can be implemented.

Specification

The following interest rate parameters have been reviewed by Llama.

Parameter

Proposed Value

Variable Base

1.00%

Uoptimal

65.00%

Variable Slope1

4.72%

Variable Slope2

144.28%

Stable Borrowing

Disabled

Stable Slope1

4.72%

Stable Slope2

144.28%

Base Stable Rate Offset

4%

Stable Rate Excess Offset

5%

Optimal Stable To Total Debt Ratio

20%

Stable rates have been updated to mitigate any risk of enabling stable borrowing and having a variable borrow rate greater than the stable borrowing rate.

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