title: Consolidate Aave V1, V2 & AMM Reserve Factors, Purchase CVX and Deploy to Earn Yield

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Simple Summary

The Aave V1, V2, and AMM market Reserve Factors (RF) on the Ethereum network hold a combined value of over \$28.27M. The Llama Community proposes consolidating the RF into the V2 RF and deploying the capital with the intention of retaining TVL and earning additional yield. The yield generated comes with the added benefit of acquiring governance tokens of other DeFi protocols and increasing Aave's metagovernance influence.

Abstract

The Llama Community recommends implementing several yield generating strategies spanning Balancer, Curve, and Convex and subsequently participating in the respective communities' tokenomic constructs. Aave will earn yield in the form of swap fee income, aToken yield derived from Aave V2, and governance token incentives in the form of BAL, CRV, CVX, stkAAVE and LDO.

The first investment theme is deploying capital into the Balancer Boosted Pool and BTC Stable Pool to earn a vAPY of around 13.4% and 4.6% respectively. The Balancer Boosted Pool invests around 80% or more of the deposited liquidity into Aave V2 to earn yield whilst also generating swap fees, stkAAVE, and BAL rewards. The Stable Pool generates income via swap fees and BAL rewards, with the latter making up the majority of the incentives on both strategies.

The second investment theme is more complex. It involves acquiring both CVX and veCRV to participate in gauge weight voting on Curve in order to influence a portion of the CRV inflation schedules to be distributed to aToken pool Liquidity Providers (LPs). Aave will deploy stables and ETH from the RF to earn additional CRV and CVX rewards, which will be used to further boost the incentive allocation to the aToken pools.

The data presented here is accurate as of the end of December 2021 data.

Motivation

Part A - Consolidation

The legacy V1 market continues to generate mostly flash loan fee revenue and this has slowed down in recent times. There is only ~\$219M of TVL remaining in the V1 market, and at the rate of which revenue is generated is expected to continue declining as more and more users move to V2 or V3 over time.

This proposal recommends consolidating the Aave V1, V2, and AMM market revenue into a single location before deploying the capital to earn additional yield. The V1 RF holds around ~\$821K of assets at the time of writing, whereas the Ethereum V2 + AMM market holds \$27.45M of assets. Consolidating the RF balance would increase the mainnet treasury to around \$28.27M. A summary of the main assets held in the V1 RF are shown below:

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Part B - Retain TVL & Increase Returns

Whilst holding aTokens is arguably one of the lowest risk yield opportunities in DeFi and something Llama Community encourages most, if not all, treasuries to hold. The Aave DAO is fortunate since it receives income in the form of aTokens. Thus, Llama recommends firstly making all unproductive stable coins productive and then optimizing further by earning additional yield and metagovernance influence.

The two main high level strategies proposed in this ARC share three common goals:

- · Retain TVL within Aave
- · Exceed aToken returns

Accumulate metagovernance influence

In addition to these three goals, the Convex / Curve strategies have the added benefit of improving the extrinsic use cases for aTokens. aToken holders will be able to deposit liquidity into the Curve aToken pools and then deposit the Liquidity Provider (LP) token into either Curve or Convex to earn additional yield.

The Compound pool on Curve has \$174.5M of TVL relative to the Aave pool which has \$55.3M of TVL. This is most likely due to the higher incentive APR that the Compound pool, 10.13% vAPY, relative to the Aave pool earning 7.58% vAPY on Convex.

Specification

Overview

Llama proposes diversifying \$26,67M (94.36%) of the combined Ethereum RFs across three protocols: Convex, Curve and Balancer. The combined Aave V1, AMM, and V2 market RF totals \$28.27M at the time of writing. A detailed breakdown of the consolidated constituents can be found on the Aave Dashboard and a high-level overview is shown in the figure below.

The table below shows the assets that will be deployed within this proposal. Note this is only 94.4% of the assets and 5.6% of the assets are to remain unchanged within the Aave V2 RF.**

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The table above includes the following stablecoins, DAI, USDC, USDT, TUSD, BUSD and sUSD from the Aave V1 and V2 markets. The AMM markets holdings have not been included as they only total \$119.3K at the time of writing.

The table below shows asset allocation per each strategy:

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The balance within the Aave V2 RF, not deployed in one of the above strategies is shown as Other (Longtailed Assets) in the figure below. The percentages reflect the overall composition of the RF, noting that 94.4% of the consolidated RF is deployed into one of the strabled detailed in the above table.

The actual implementation of this proposal is likely to be spread across several AIPs. This is to reduce the implementation complexity and allow the several positions to be swapped / redeemed before being deployed into a bonding curve whilst we await the Chainlink CVX oracle being released and getting the Aave V2 RF whitelisted to deposit into the CRV locking contract to attain veCRV.

The subsequent sections provide further insight into each strategy and how they are to be funded.

Convex / Curve Strategy

Convex Allocation

The Convex (CVX) allocation is to be funded by the assets mentioned in the table below:

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In order to fund the initial \$2M purchase of CVX, all of the AMPL, BUSD and TUSD will be used (\$842.2K) and the balance, \$1,16M, will be funded with USDC. This is the initial purchase of CVX and with a unit price of \$43.20 is equivalent to about 46,300 CVX tokens.

We expect to make additional CVX purchases in order to meet the minimum voting hurdle required to influence how Convex's veCRV holding is deployed on Curve gauges. Based upon this <u>snapshot</u> and the <u>Voting Rules and Information</u> section of Convex's documentation, we estimate around 70,000 CVX votes are needed to clear the hurdle rate. This is expected to cost a further \$1.02M to what is proposed above and represents less than 1 months revenue. We intend to fund this through future revenue and have a sufficient buffer to the hurdle rate based upon voter participation on Convex's snapshot.

The assets are to be converted to ETH and then used to purchase CVX via a Bonding Curve with a 50 bps premium that utilizes a Chainlink oracle price feed. Alternative methods can be discussed in the comments. However, we opt for a solution that can be implemented entirely through the AIP governance process and does not include manual trading.

AMPL is the most illiquid of the mentioned tokens and this position will need to be converted to ETH over a series of transactions. Trades are to be routed through an aggregator with MEV protection like CowSwap. The most liquid AMPL pools are on Uniswap V2 and Sushiswap. Wherever possible, aTokens will be swapped rather than redeemed in an attempt to retain TVL in the Aave V2 market.

The newly acquired CVX will be locked for 16 weeks with voting rights delegated to Llama in order to vote on both Aave and sAave gauges via Convex's snapshot to increase the amount of CRV rewards received on the Curve pools. Voting occurs every 2 weeks via Snapshot and thus the need for a delegate.

The locked CVX also receives a portion of the protocol fee income and votes on how Convex's veCRV are distributed across Curve's gauges. Llama Community acting as the delegate will vote to boost CRV rewards on the Aave pool as a priority and sAave once sufficient voting influence has been attained.

4 Year Locked Curve (veCRV) Allocation

The aCRV tokens that have accumulated within Aave V2 are to be redeemed for CRV and then locked for 4 years on Curve to receive an equal amount of veCRV. This strategy is subject to Aave's V2 RF being approved and whitelisted via Curve's governance process.

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The veCRV position will then be used to vote for CRV incentives to be allocated to the Aave and sAave pools via the respective gauges. Based on the CVX strategy discussed prior, these veCRV votes are likely to be allocated to the sAave gauge.

Subject to the timeline and attaining the whitelist permission to deposit into Curve's veCRV contract, the alternative strategy is to convert CRV to cvxCRV, then stake to earn CRV, CVX and 3crv, pulse any airdrops that go to veCRV holders. This is expected to generate 47.35% vAPY, see snippet below.

The earned CRV will be converted to cvxCRV and this will compound over time. The earned CVX will be locked to increase Aave's voting influence and the 3crv will be exchanged for CRV, then converted to cvxCRV to further compound the strategies returns over time.

Productive aToken Stable Strategy

The sAave and Aave strategies include depositing capital into a Curve pool and then staking the LP token on Convex to earn stkAAVE, CVX and CRV rewards. The two strategies are expected to generate around 4.07% vAPY and 6.19% vAPY before Aave's CRV and CVX voting influences the CRV incentive derived yield.

The table below shows the allocation, how each strategy is funded, and which pool those funds are to be deposited into.

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Productive ETH Strategy

After transferring the ETH from Aave V1 RF to Aave V2 RF, the awETH is to be redeemed for ETH and the combined ETH deposited into the Curve stETH pool. The LP token steCRV is to then be deposited and staked in Convex to earn CRV, CVX and LDO incentives. The expected yield is around 6.65% vAPY.

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No vICVX or veCRV voting rights will be used to attract CRV incentives on this pool as the pool does not contain any aTokens.

Balancer Strategy

Balancer Boosted Pool Strategy

Balancer has recently launched the first <u>Boosted Pool</u> on Wednesday 16th December and liquidity mining incentives have already commenced generating around 13.4% vAPY at the time of writing. Using the <u>Stable Pool</u> as a guide, we expect Balancer to grow the Boosted Pool with the use of Liquidity Mining (LM) and even replace the Stable Pool in time.

The Balancer Boosted Pools earn swap fee income, LM incentives, and a new type of yield derived from unproductive capital being deposited into Aave V2 to earn yield. Llama expects the yield of the Boosted pool to exceed the Stable Pool in order to entice users to move across. Llama expects LM incentives to be the mechanism for achieving an elevated return while the pool is in its bootstrapping phase.

The strategy for Aave is to deposit an equal amount of DAI, USDC and USDT into the Boosted Pool. All BAL rewards are to be retained to accumulate governance influence.

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Productive BTC Strategy

After transferring the wBTC from Aave V1 RF to Aave V2 RF, the awBTC is to be redeemed for wBTC and the combined wBTC deposited into the Balancer BTC Stable pool. The LP token staBAL3-BTC is to be held in the Aave V2 RF and the expected yield is around 4.60% vAPY. The BTC Stable pool receives around 4.07% vAPR in BAL rewards.

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Conclusion

The implementation of the above proposal is expected to be performed in parts as it involves deploying capital into six different yield generating strategies, Aave being whitelisted of Curve and swapping existing assets for CVX. This proposal includes the Aave DAO's first allocations to another governance token and the first deployment of community's capital to earn additional yield. The increased APY on the two Curve aToken liquidity pools is expected to improve the extrinsic use case of the most commonly held aToken as well as increase the CRV and CVX rewards Aave DAO receives for being an LP in the two pools.

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