

Summary

We outline a 12-month proposal to work with Aave on treasury management, protocol upgrades, growth, and analytics.

The Proposal

Context

[Llama](#) is one of the most active contributors to Aave. We hope to deepen our engagement with the community and ensure that Aave is a market-leading protocol for many decades to come.

Aave currently has \$10 billion of liquidity and is growing rapidly. Aave V2 is deployed on four markets and V3 is deployed on six markets, with more in the works. Aave DAO has supported community initiatives like Aave Grants DAO, Bored Ghost Developing (BGD), and Gauntlet, which have served to advance the protocol.

To continue its rate of growth, the community needs to onboard proven contributors who can drive value to the Aave ecosystem. Skilled teams that have the knowledge, trust, and alignment can meaningfully contribute to growing Aave.

Llama has received grants from Aave Grants DAO over the past 12 months for work that includes treasury management, protocol upgrades, DAO to DAO partnerships, and analytics. Aave Grants has recommended that we move from short-term grants to a longer-term work scope funded through governance, allowing us to drive more impact to the Aave ecosystem.

Llama

Overview

Llama works with DAOs on protocol engineering, treasury allocation, and analytics. Our customers include Aave, Nouns, Uniswap, dYdX, Lido, Gitcoin, Maker, Radicle, PoolTogether, and FWB. We have implemented protocol upgrades, built treasury strategies and liquidity incentive programs, created bidding interfaces and on-chain indices, and built analytics dashboards and financial reports.

Our Values

- Rigor
- . Work done by Llama is of the highest quality. We care deeply about getting the details right.
- Ownership
- . We treat the problems of our customers as if they were our own. There is little to no separation between Llama and the DAOs we work with.
- Trust
- . We seek to actively earn the trust of our customers. We involve the community in our work and incorporate feedback where relevant.
- Transparency
- . We believe in open lines of communication and are comfortable working in a DAO-native manner.

Previous Work with Aave

A selection of our work with Aave includes:

- [Treasury Vision](#)
- Comprehensive treasury management vision for Aave outlining a governance structure, a philosophy around risk management, and key reporting objectives.
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- [Asset Management Guidelines](#)
- Objectives, constraints, and risk management guidelines for Aave's treasury.

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- [Initial Treasury Strategy](#)
- Proposal to deploy a portion of the Reserve Factor to earn additional yield by acquiring BAL rewards on Balancer V2.
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- [Updated Treasury Strategy](#)
- Proposal to consolidate Aave's Reserve Factors and deploy the capital to BAL, CRV, CVX, stkAAVE, and LDO to earn yield and direct CRV rewards.
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- [Treasury Analytics Dashboard](#)
- Easy-to-use resource for diving into Aave's treasury balances and growth, revenue and expenses, token holdings, and fund flows.
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- [Financial Reports](#)
- Monthly financial reports containing treasury balance and contract information, income statements across all markets, token flow statements, and assets by chain.
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- [V2 Liquidity Mining Program](#) (90 days at 30% reduced rate)
- Note that Index Coop worked on this but Llama put up the on-chain proposal.
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- [Strategic Partnership with Balancer](#)
- Proposal to acquire 300,000 BAL tokens via a combination of a token swap with Balancer and a Bonding Curve contract.
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- [Consolidate Reserve Factors and Enable DPI Borrowing](#)
- Consolidate revenue earned on all Aave markets on mainnet into one Reserve Factor.
- Re-enable borrowing of DPI after it was disabled with AIP-44.
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- [CVX Listing](#)
- Risk analysis and on-chain proposal to list CVX on Aave.
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- [Aave Governance Proposal Payload Template](#)
- Open-source template for creating Aave governance proposal payload contracts.
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- [1Inch Listing](#)
- Risk analysis and on-chain proposal to list 1Inch on Aave V2.
- Risk analysis and on-chain proposal to list 1Inch on Aave V2.

- [FEI Risk Parameter Updates for Ethereum Aave V2 Market](#)
- Proposal to disable borrowing and deposits on FEI markets and route 100% of the interest paid by FEI borrowers to the Reserve Factor.
- Proposal to disable borrowing and deposits on FEI markets and route 100% of the interest paid by FEI borrowers to the Reserve Factor.
- [Add stMATIC on Aave V3 Pool on Polygon](#)
- Proposal to list stMATIC on Aave V3's Polygon pool.
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The Proposal

Llama complements BGD, Gauntlet, and others who might emerge by offering support to grow the Aave ecosystem. We focus on three key areas:

- Treasury Management and Analytics
- Use the treasury to support and enable the growth of Aave across various networks. This includes:
 - Deploying Aave's Ecosystem Reserve, Reserve Factors, and Safety Module
 - Hedging to reduce asset price exposure
 - Generating yield for the DAO
 - Managing the associated risk profile of the community's funds
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- Create a custom-built analytics system (data warehouse) for Aave to provide live insights into the DAO's financial performance. This system will overcome the challenges of existing analytics platforms like Dune and go beyond the limitations of subgraphs to provide more relevant data for Aave.
- Generate financial reports and create an interface showcasing Aave's financial, operational, and investment performance.
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- Growth

- Grow TVL, revenue, and market share for Aave markets. Our work will include liaising with central exchanges and market makers, deploying Protocol Owned Liquidity within DeFi, and putting forward incentive proposals that will fuel the adoption of AAVE across the ecosystem.
- Work with DAOs to grow the adoption of GHO and aTokens by integrating them across DeFi and by supporting initiatives that promote the usage of Aave markets.
- Work with other contributors to deploy and roll out new types of collateral, such as ERC-4626 strategies which enable deposits to earn incentives while simultaneously serving as collateral.
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- Risk Underwriting and Liquidity Analysis
- Develop a model that shows how GHO interacts with Aave markets and the risk it creates under various market conditions.
- Work on risk assessments for select assets that propose being listed on Aave.
- Model veBAL and (potential) vAURA holdings to achieve a desired level of yield based upon broader market analysis. Include this analysis in growth plans and management of the DAO's treasury.
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The tables below provide examples of the initiatives with which Llama plans to support Aave.

Treasury Management and Analytics

Task

Description

Strategic Partnerships

Work with other communities to determine if they are a good match for the Aave community and Aave's vision/future intentions. Coordinate and deploy all on-chain proposals across necessary platforms.

Acquire assets to accelerate growth or provide a competitive edge. This includes the construction of investment strategies and submission of AIPs to acquire, deploy, and maximize the utility of any acquisition.
E.g. Acquire BAL, deploy to B-80BAL-20WETH, then deploy into veBAL and coordinate / implement DAO voting on BAL incentive distribution.

Yield Optimization

Deploy a portion of the DAO's funds across diversified strategies of varying risk profiles to earn yield across many networks while maintaining sufficient stablecoin runway and optimizing risk exposure.

Design, model, and deploy investment strategies across various networks via Aave's governance process to earn yield on assets held in the respective network's Reserve Factor. Preference will be given to acquiring tokens that provide extra utility to the DAO beyond governance influence. Llama will optimize for the intersection of risk, including smart contract surface area, and return on investment. These strategies will be biased towards retaining the accrued governance token yield.

Grow Aave's Revenue

Position Aave's assets to bolster revenue growth. Utilize assets from the Reserve Factor to unlock and promote the growth of Aave markets and revenue.

Deploy the Reserve Factor to boost Aave's revenue. Enable the Balancer and Aura strategies to have a meaningful impact

on TVL and revenue.

Hedging

Explore and implement ways to provide downside protection to the Ecosystem Reserve.

Aave's token price is volatile and the DAO has significant exposure to this single asset. Reduce asset price exposure through hedging, which may include using derivatives on a rolling basis, to protect against adverse market conditions.

E.g. hedging downside price exposure of the Ecosystem Reserve whilst the Safety Module is heavily concentrated in AAVE.

Optimize the Safety Module (SM)

Create various optimizations for the SM to ensure that it functions with Aave's increased TVL.

The SM provides a backstop to Aave markets. As Aave's TVL grows, the SM must grow with it. Aave's capital is limited and must be managed to maximize the backstop for users. Deploy upgrades to improve the capital efficiency of the SM and maximize the dollar value of the backstop.

Create risk tiers and enable different types of passive and productive assets to be added to the SM ensuring the auctioning process functions smoothly.

Adjust yield for varying risk tiers while optimizing capital efficiency to minimize overpaying.

Safety Module Performance

Provide detailed analysis of the SM's historical and current performance relative to TVL, market conditions, and market volatility.

Backtest different compositions of the SM with assets of varying volatility and correlations to Aave's TVL. Track the DAO's ability to cover % of TVL on various markets with market price movements.

Shortfall Event Analysis

Model the effect of a shortfall event on the SM's backstop and AAVE token price.

Develop models that simulate the effect of a shortfall event and how the market would absorb the sell pressure of various assets. Ensure the unlock period is sufficient to enable the governance process to be enacted.

Runway Analysis

Provide analysis that will shape investment, amongst other, decisions across the DAO.

For the DAO to grow in a sustainable manner, sufficient capital must be kept safe to guarantee the longevity of the community. Model expenses, revenues, and various market conditions. Liaise with other members of the DAO to create a comprehensive forecast of the DAO's finances. Draw upon input from community members who have received AIP funding and those delivering material improvements across the Aave ecosystem.

Develop a Data Warehouse for Aave

Develop a live, customized, and transparent financial reporting backend solution for Aave.

Develop a data warehouse that combines and transforms on-chain data from numerous networks with off-chain data sources to provide a comprehensive base layer of Aave blockchain data that can be used to build real-time analytics dashboards. This will enable live financial reporting for the various Aave markets and Aave DAO as a whole.

Accounting Reports

Publish financial reporting statements enabled by the data warehouse.

Provide monthly and quarterly financial statements including income statements, cash flow statements, and balance sheets. Provide periodic token distribution analyses, transparency on outflows, and more economic analyses. In time, this will be expanded to cover the Aave Grants DAO as well.

Investment Performance Reporting

Provide visibility into each investment strategy, its performance, and associated risks.

Use the data warehouse to provide in-depth analyses of the performance of the DAO's assets, ROI, recent price valuation, and volatility analysis. Share this data through reports on the forum and a dedicated website alongside other financial reporting data.

Financial Data Analytics

Identify key financial metrics for Aave.

Develop a UI to display these financial metrics for the community.

Identify the financial metrics that enable community contributors to prepare and write their own financial analysis of Aave. Some examples of financial metrics are shown below:

- Financial performance over time
- Revenue sensitivity analysis showing the effect of changing the Reserve Factor on various lending pools
- Free Cash Flow analysis

Growth

GHO Facilitator Strategies

Design facilitator strategies. Bring GHO adoption to L2s.

E.g. Design new use-cases to mint GHO, such as minting against cross-chain assets (without the need for bringing), RWAs, credit instruments, or DAO treasuries.

ARC Market Liquidity Mining Module

Upgrade the Aave ARC market to include a liquidity mining module.

Deploy an upgrade to the ARC market implementing LM functionality (required if incentives are distributed across the market).

New Collateral Types

Work with Balancer to bring a new type of productive collateral to Aave markets and subsequently roll it out across the various Aave V3 deployments.

Collaborate on the creation of new types of collateral which will drive TVL and use of Aave markets. E.g. Create ERC-4626 strategies that enable BPTs to be deposited whilst enabling users to earn rewards as if the BPT was deposited into an Aura gauge.

DeFi Integrations

Bolster the adoption of aTokens and GHO across DeFi by supporting initiatives that build on top of Aave markets or integrations that create TVL for Aave markets.

Identify and promote new initiatives that will grow TVL and adoption of GHO. This will span liquidity growth and the integration of AAVE and aTokens into other protocols.

E.g. Create linear pools on Balancer V2 that deposit tokens into Aave markets to earn yield (for example, bb-a-USD).

Protocol Owned Liquidity

Utilize the DAO's assets to provide Protocol Owned Liquidity.

Research and implement strategies to increase adoption including (but not limited to) liquidity mining, Protocol Owned Liquidity (POL), bootstrapping decentralized exchange liquidity pools, and engaging with market makers who will support Aave's tokens on centralized exchanges.

Metagovernance

Enable AAVE and stkAAVE holders to participate in metagovernance by voting on proposals within other communities in which Aave DAO holds tokens.

Enable, support, and implement any metagovernance initiatives on behalf of the community as it grows and starts participating in other communities' governance votes.

Risk Underwriting and Liquidity Analysis

GHO Performance & Liquidity

Provide insight into how GHO is created and used across DeFi.

Provide financial metrics that track performance over time. E.g. Velocity, average holding size, holding duration, and

deposits into a yield vault. Track the price relative to \$1 on various platforms and price impact versus trade size. Track any deviation from \$1 and how the market is responding to correct the price over time. Design and recommend strategies to improve the price relative to \$1.

Asset Listing Risk Assessments

Support asset listings by providing a qualitative risk analysis report on the forum that details the initial risk parameters.

Adopt any risk parameters suggested by Gauntlet, provided borrowing is enabled at launch.

Continue to support communities seeking to list their token on Aave markets by performing and publishing risk assessments with suggested initial parameters. Llama has a strong track record of progressing assets from the original ARC to AIP submission. Liaise with individual communities and support new asset listings, with all efforts outside of the risk assessment funded by those respective communities.

Risk Parameter Amendments

Act to reduce the risk exposure of Aave DAO where appropriate based on qualitative assessments of events across DeFi.

Act to minimize the DAO's exposure to assets that have changing risk profiles due to idiosyncratic risk events Eg: Freeze FEI reserve before liquidity conditions change. Note: Llama's assessments will not overlap with Gauntlet, but rather will complement Gauntlet's efforts.

Asset Liquidation Risk

Show the extent of bad debt across Aave markets and potential liquidation thresholds.

Enable users to simulate what will happen to their assets with asset price changes.

Develop a graphical representation of the distribution of borrower positions across the market. Use this data to support analysis of the SM and commentary around the ability of the SM to provide a backstop in various scenarios.

Liquidity Analysis of Specific Strategies

Aave markets are used to deploy strategies to earn yield which creates concentrated risk on several assets.

Perform selective detailed analysis on those strategies.

Provide detailed analysis of specific strategies and types of users. This will span revenue creation and risks and will provide context for potential impact in a shortfall scenario. E.g. Tracking liquidity across DEXs, price impact and availability to execute large trade sizes across DeFi for listed assets, impact of variations in price between assets within the strategy (stETH & ETH or MaticX & wMATIC).

Risk Modeling for DAO Investments

Model various risk scenarios to ensure the DAO has exit strategies during periods of market turbulence.

Provide detailed risk analysis (including tail-risk analysis and scenario forecasting) on DAO investments in preparation for deploying the community's funds via the governance process, taking into account the nature of how DAOs work and how quickly DeFi evolves.

Compensation Model

Llama charges a \$2.5 million fee for 12 months. This fee is broken down into three components:

- \$0.5 million paid up front in stablecoins.
- \$1 million paid in stablecoins and streamed linearly over the course of the contract.
- \$1 million in AAVE vested linearly over the course of the contract.

There isn't much precedent for pricing work involving protocol upgrades, treasury management, growth, and analytics. However, in preparing this proposal, we reviewed similar proposals from [BGD](#), [GFX Labs](#), [Gauntlet](#), [Certora](#), [Sigma Prime](#), and [Aave Companies](#). None of these proposals are perfect comparisons but they may serve as useful reference points.

KPIs we focus on include:

- Treasury growth
- Revenue growth

- Completion of monthly accounting reports
- Completion of data warehouse
- Completion of analytics dashboards
- 0% loss of funds
- 50% of DAI, USDC, USDT, and ETH from the Ethereum Reserve Factor actively deployed

Engagement Expectations

- The duration of the engagement will be ongoing, with the initial proposal spanning 12 months. Towards the end of the 12-month period, a new proposal will be drafted and shared on the governance forum.
- With rare exceptions, payloads will be shared with BGD or Aave Companies before being submitted as AIPs for on-chain voting.
- We will provide regular updates on the forum with details on our work and will solicit feedback from the community to ensure we continue to uphold the commitments outlined above.