



TAU LABS

AAVETHENA LOOPING VAULT

USDe & sUSDe looping on Aave's Mainnet
instance

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Executive Summary

TAU's AavEthena Loop Vault provides capital and fee efficient exposure to the Ethena looping strategy on Aave's Ethereum instance.

The vault runs a leveraged yield strategy on USDe and sUSDe using Aave on Ethereum. The strategy's collateral consists of 45% USDe and 55% sUSDe to borrow USDT and leverage up collateral positions to 9.52x (89.5% LTV).

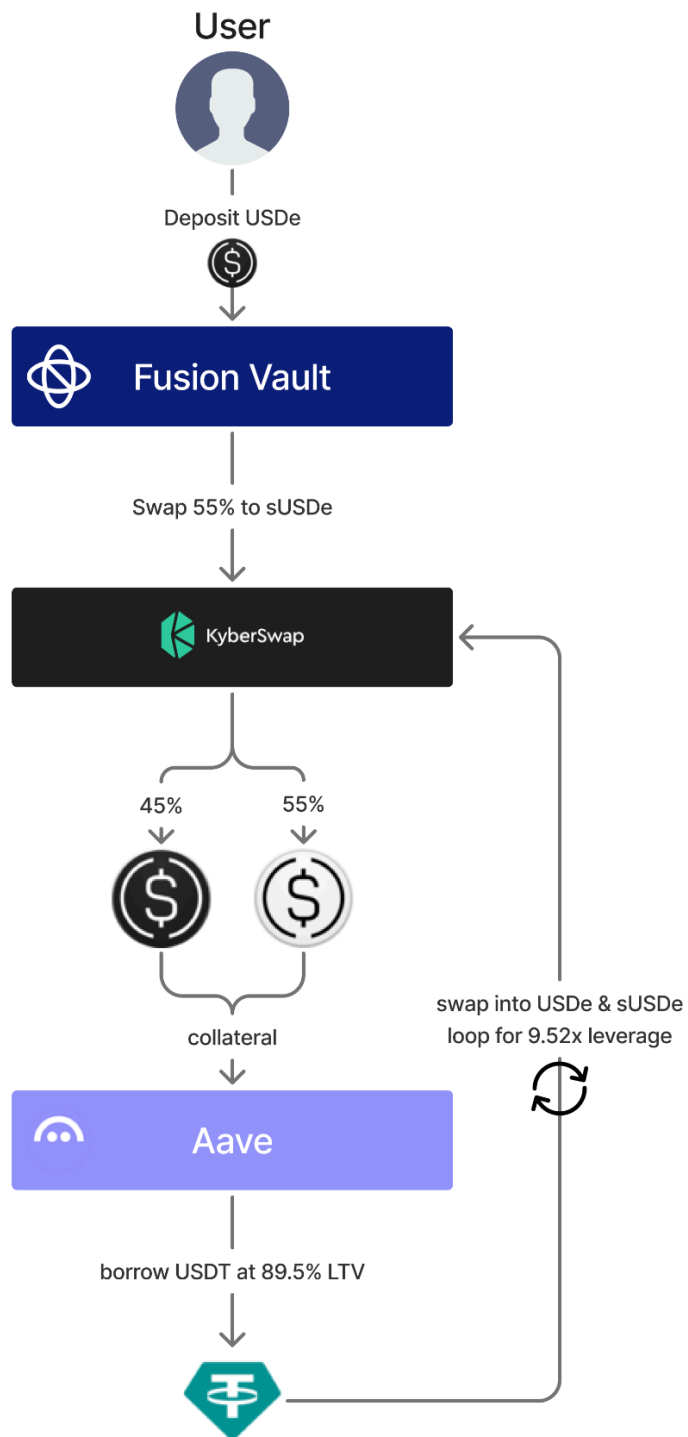
The collateral composition is chosen to be eligible for the Merkl rewards distribution. Under current assumptions, the vault earns 4.44% on USDe, 3.56% on sUSDe, while borrowing USDT for 3.66%. With the 9.52x leverage, the strategy is forecasted to generate an **organic net APR** (after performance and management fees, not including on- and off-boarding fees) **of 5.33%**.

Airdrop yield for Ethena points is expected to add **~3.24%** based on current market pricing of Pendle YTs.

Strategy

How it works

1. Users deposit USDe
2. 55% of USDe is swapped to sUSDe
3. Flashloan loop the sUSDe and USDe against USDT at 89.5% LTV using Aave's e-Mode



Parameters

Parameter	Value	Reasoning
sUSDe LTV	89.5%	sUSDe e-Mode provides a 90% max LTV with a 92% liquidation threshold Using 90% LTV provides a liquidation buffer of a 2.72% price drop
USDe LTV	89.5%	sUSDe e-Mode provides a 90% max LTV with a 93% liquidation threshold Using 90% LTV provides a liquidation buffer of a 3.76% price drop

Yield Forecast

Assumptions

- sUSDe yield: 3.56% (trailing 30-day yield; last update February 25)
- USDe yield: 4.44%, made up of 3.56% rewards (in aUSDe) via Merkl and 0.88% protocol APY from lending on Aave
- UDST borrow costs: 3.66% (trailing 30-day average)

Yield Forecast

Given the assumptions and parameters mentioned above, the expected organic gross yield is 6.48% APR. Given a vault management fee of 0.5% and a performance fee of 10%, organic net yield would come out at 5.33% and net yield with points would be 8.57%.

Onboarding and offboarding fees are planned for 0.1% each.

Alternative yield scenarios (net of fees with points included)

Alternative yield scenarios		Weighted collateral APY		
		3.50%	4.00%	5.00%
Borrow costs	3.50%	3.50%	8.26%	17.79%
	4.00%	-0.76%	4.00%	13.52%

	4.50%	-5.02%	-0.26%	9.26%
	5.00%	-9.29%	-4.52%	5.00%

Risk

Assets

- Backing and Counterparty Risk of (s)USDe: USDe is backed by a mix of delta-neutral derivatives positions, making up ~40% of backing and liquid assets (~60%). Delta-neutral positions come with the following risks:
 - 1) Funding Risk: If funding rates remain deeply negative for an extended period, the protocol may incur costs rather than earn yield, potentially leading to undercollateralization
 - 2) Liquidation Risk: For short positions backed by different assets than the underlying (e.g. ETH short backed by stETH or stables)
 - 3) Exchange/Counterparty Risk: Because the short positions are held on centralized exchanges (via OES providers like Copper or Fireblocks), a total collapse of a major exchange or the settlement provider could result in a loss of the backing assets.
 - 4) Backing Assets Risk: The risks associated with reserve assets, such as LSTs and liquid stables. This includes smart contract risks, custodial risks, and reliance on the traditional banking system.

In the event of a deficit, Ethena's ~\$70m reserve fund jumps in. If this is not enough to cover the hole, losses are socialized first across sUSDe, then USDe holders.

 - [Find out](#) how Ethena manages these risks
- Smart Contract Risk for USDe/sUSDe: As with any synthetic dollar protocol, Ethena's smart contracts manage the minting, redemption, and staking (sUSDe) processes. A vulnerability in the code, an issue with the OES (Off-Exchange Settlement) integration, or a compromise of the multi-sig keys could lead to a loss of funds. Ethena has undergone multiple audits by firms like Spearbit, Quantstamp, and Zellic. To mitigate governance risk, Ethena utilizes a multi-sig for protocol changes, though it is important to note that the protocol relies heavily on the integrity of the automated hedging service that manages positions across various centralized exchanges (CEXs).
- Temporary illiquidity of sUSDe: sUSDe requires a 7-day cooldown period to unstake back to USDe. DEX liquidity serves as instant withdrawal capacity but might get depleted in stress scenarios

Protocol

- Smart Contract risk of Aave and IPOR Fusion
 - Given Aave's long track record without significant exploits and standing as the top DeFi protocol by TVL (\$30B), their overall risk is relatively low compared to the broader DeFi ecosystem.
 - IPOR Fusion launched in September 2024 and has since reached an AUM of \$200m+. Every integration of DeFi protocols goes through [multiple levels of testing](#) to ensure the highest level of security.
- Oracle risk, including stale prices during volatile markets and oracle attacks. Given Aave's long track record and standing as the top DeFi protocol by TVL (\$30B), their overall risk is relatively low compared to the broader DeFi ecosystem.

Strategy

- Liquidation risk: A drop in (s)USDe's price may result in a liquidation. The relevant liquidation penalty applies, leading to a loss for the vault. As Aave currently pegs USDe to USDT and also uses this hardcoded USDe price to calculate the sUSDe price, liquidation risk is zero as long as USDe remains redeemable 1:1. The backing risk is explained above.
- Interest rate risk: Borrow rates on Aave change based on utilization rates, plus (s)USDe yield varies, which may turn net yield negative and require deleveraging the strategy.
- Liquidity risk: Withdrawals on Aave may be limited during times of high utilization.