Summary

Aave has seen a massive surge in ETH borrowings since the addition of stETH, allowing users to earn ~4% returns on their staked ETH while still being utilized as collateral in Aave. The utilization of ETH has increased by 4-6x from [3-4% to 18%](#) and is now critical to growing much further under current conditions (explained "why" below):

Description

ETH's rate curves in all lending protocols have long been stagnant, considering there has been no massive demand for ETH borrowings. Therefore the ETH rate curves are not as optimized as stable coins rate curves. The current rate curve for ETH is not optimized for the protocol to receive the best revenue, with the inclusion of stETH collateral, the demand for borrowing of ETH could be much higher (~$5B) and more so with accompanying e-Modes, I believe the interest rates need to be optimized accordingly. Optimizing the interest rates for ETH will allow the protocol to get vastly more revenue, lenders will receive better returns, and possibly suck billions of $ worth of ETH into the AAVE protocol.

Staking amount vs staking rates:-

Current stETH rewards are ~4%. Staking rewards on ETH via Lido are still relatively high and stETH still has the capacity to accept another ~$4.5B of ETH [src](#). This increase in stETH supply would only reduce the rewards by 0.3%, meaning there is at least 1.5M ETH (~$4-5B USD) that could get staked. For Aave, it represents $4-5B in borrowings of ETH (more significant than any borrowing market that currently exists across any token)

Problems with current ETH rates on Aave:

Before the stETH addition to Aave:

- Utilization: 3-4%

- Borrow rates: ~0.4-0.5%

- Supply rates: <0.1%

After the stETH addition to Aave (as of today):

- Utilization: 18%

- Borrow rates: 2.22%

- Supply rates: 0.3-0.4%

[source](#) for all the data.

Lets determine how high the rates could go with the current rate curve before borrowing ETH against stETH is no longer sensible. One way to calculate this would be to calculate when non-leveraged gains (holding stETH in the wallet) = leveraged gains.

Leveraged Gains Formula

Mini formula to calculate it:

- Leveraged gains. The maximum leverage scenario here is at 75% (the liquidation limit of stETH, most optimized but no user will go that far).

- 75% meaning 4x collateral & 3x debt. 4x stETH collateral & 3x ETH debt.

- Gains = 4 * y (stETH rates) - 3 * z (borrowing rates) = 4y - 3z.

- Formula: 4y - 3z.

Now for leveraging (borrowing ETH) to make sense, the gains from leveraging should be greater than what we earn from stETH hodling. Meaning, 4y - 3z > y.

If y is "4", z needs to be less than "4", at "4", the benefit of borrowing ETH is 0. I suggest the borrowing rate should be around "3" for leveragers to have good benefits. This would require the rate modal to be optimized in a way where borrowers have enough incentives to borrow, and lenders have incentives for lending.

Considering the situation with the current modal at a 3% borrowing rate:

- Utilization: 24.5% [very low utilization leading to less revenue generation]

- Borrowing rate: 3.02%

- Supplying rate: 0.66% [low incentives for new lenders to come in]

Considering new rates: kink at 3% borrow rate and 70% utilization.

- Utilization: 70% [good revenue for governance]

- Borrow rate: 3%

- Supplying rate: 1.9% [decent for new lenders to come in or to get a discount for stable coin borrowing against ETH]

Conclusion:

Refactor the ETH borrowings rate as the borrowing demand and market conditions of ETH have changed. The improved rate curve will make it better for Borrowers, Lenders and increase the protocol revenue from ETH by at least 3x.

Update:

The proposal is live. Find it here.