

UniBoost: A Trustless and Permissionless Liquidity Mining Tool for Uniswap v3

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Motivation

- Various liquidity mining protocols exist: Curve, Balancer, Aura, Beethoven X, Convex.
- Most protocols are not permissionless and require locking tokens to gain voting power.
- Curve provides permissionless pools with rewards, but Uniswap v3 lacks such design.
- Introducing UniBoost: Trustless and permissionless liquidity mining tool for all Uniswap v3 pools.

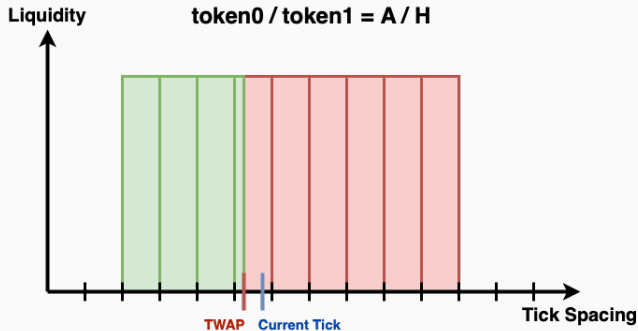
UniBoost Overview

- DeFi app offering trustless and permissionless liquidity mining for Uniswap v3 pools.
- Two main roles: incentivizer and liquidity provider.
- Liquidity providers offer liquidity on Uniswap v3.
- Incentivizers aim to boost liquidity of a specific token **A**, paired with a health asset **H**.
- Supports various common health assets: ETH, BTC, USDC, USDT, DAI, and FRAX.

Liquidity Boosting Mechanism

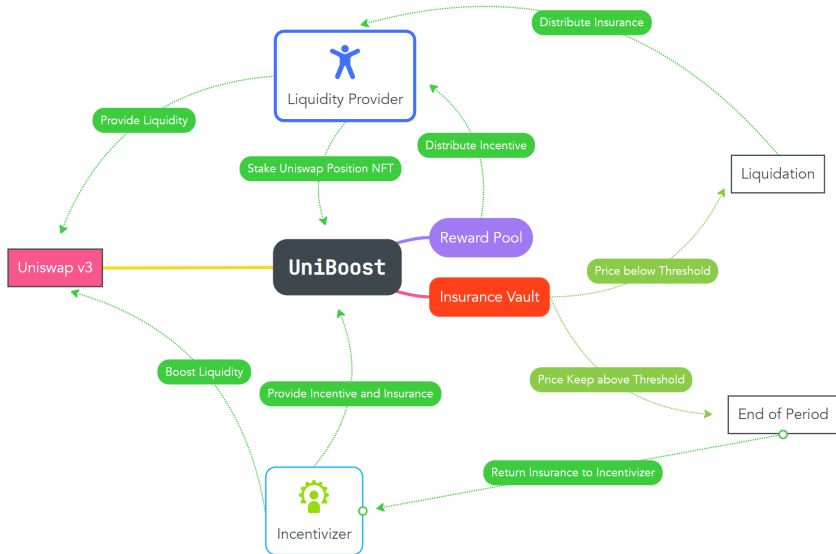
- Incentivizers enable boosting programs, providing rewards and insurance fund for liquidity providers.
- Rewards distributed proportionally to trading fee earned by token **A**, ensuring only effective positions are rewarded.
- Insurance used for protecting liquidity providers from abnormally huge value drop of **A**.
- If price falls below a certain threshold, project closes and insurance is distributed among users.

Insurance Feature



- Unique feature reducing risk of loss for liquidity providers.
- Protects only risk exposures on health assets.
- Uses TWAP to prevent flash loan attacks.

UniBoost System



Starting a Project

- Six parameters required:
 1. **Pool address:** Uniswap v3 pool to be boosted.
 2. **Boost factor:** Incentive distributed proportionally to token **A** trading fee multiplied by boost factor.
 3. **Close time:** Time when project ends. If not liquidated, insurance returns to project owner.
 4. **Insurance amount:** Locked insurance vault amount, denominated in health asset **H**.
 5. **Incentive amount:** Amount of incentive in **H**.
 6. **Liquidation price:** Project liquidated when pool price drops below liquidation price.

Using UniBoost as a Liquidity Provider

- Functions for liquidity providers:
 1. Stake the position NFT into UniBoost corresponding to the pool.
 2. Claim reward for the position NFT, with a minimum staking time required.
 3. Trigger the liquidation process if the price meets set conditions.
 4. Claim insurance share after project liquidation by interacting with the contract.

Using UniBoost as an Incentivizer

- Functions for incentivizers:
 1. Start a boost program.
 2. Add incentive and insurance fund for the program.
 3. Claim remaining incentive and insurance after program completion.

- Plan to allow anyone to add insurance to UniBoost, rewarding them with a portion of the reward pool.
- Enables individuals confident in token **A** to earn rewards while improving token security.

- UniBoost: Trustless and Permissionless Liquidity Mining Tool.
- Boosts liquidity and provides insurance, encouraging users to provide liquidity while reducing the risk of loss.