Rated pools: pools designed for yield-bearing tokens

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Definition

Yield-bearing tokens are tokens that provide some form of added gain on top of ordinary token-holding.

For example, when staking NEAR on Metapool, a liquid staking solution built on top of the Near protocol, users receive stNEAR.

The value of stNEAR is constantly increasing, because the underlying yield, which comes from securing the network, is continously accumulated. The yield remains represented by the tokens that the user initially received when depositing into the strategy / liquid staking solution.

When the user redeems the stNEAR from the Metapool contract, they will receive more of the token that they initially deposited.

Rated pools are specific pools specifically designed for this type of tokens.

Opportunity

Tens of millions in USD value have already been traded in the vanilla stNEAR <> wNEAR pool. Although the vanilla pool offers a good trading "base", it is not optimal for large amounts, which suffer too high a price impact due to the normal invariant.

The new stNEAR <> wNEAR rated pool provides an optimal solution for both, liquidity providers and traders by offering:

- Lower price impact for large amounts thanks to a Stableswap-like invariant

- Higher liquidity with reduced divergence loss risk

Solution

LiNEAR and stNEAR can now be traded against wNEAR in a specifically designed environment. Traders can also benefit from the new pools as hop in the Auto Router.

One of the key designs of the solution, is the ability to synchronise the rated pools with the yield-bearing tokens' prices, which change every epoch. The solution combines both, on-chain and off-chain methods.

There are several "watchdogs", running on different locations, that keep an eye on each yield-bearing token price, fetching the price direcly from the associated contract. If any price change is detected, the "watchdogs" would call a sync interface of the Ref contract to notify and trigger an on-chain cross-contract price fetch/update.

In addition to this built-in dynamic price, the solution has a fail-safe feature. If the yield-bearing token price fails to update over a specific period of time, any changes that would involve the yield-bearing token price would be halted (i.e swap and add liquidity), thus mitigating the risk of unfair arbitrages of the rated pools.