Concentrated Liquidity

Concentrated liquidity allows a user to provide liquidity within an arbitrary pre-defined price range on a single AMM curve. This contrasts with ambient liquidity, where the liquidity remains active across all possible prices from zero to infinity.

The advantage of concentrated liquidity is primarily capital efficiency. The LP only has to commit collateral to support a restricted range of liquidity. For example a stablecoin pair that trades between 0.99-1.01, it requires significantly less capital to provide concentrated liquidity in this range.

The downside of concentrated liquidity is that the position no longer accumulated fees if the curve price moves outside the range of the order. Therefore the concentrated LP either has to size their price range wisely, or periodically "rebalance" their order to move it back into range.

Ambient also supports native ambient liquidity, which is distinct from "full-range concentrated liquidity". The first advantage is that instead of accumulating fees in a separate side-pocket, fees accumulated by ambient LP positions auto-compound back into the original position without any manual management. The second advantage is that minting and burning ambient LP positions requires significantly lower gas costs. The third is that all ambient LP positions on a given curve are naturally fungible and can be easily wrapped into "LP tokens".

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