Liquidity Strategies

This page explores some of the ways an LP might use Maverick. Maverick AMM provides a flexible set of tools to facilitate a wide variety of liquidity strategies. This page presents an overview of some of the basic use-cases for Maverick AMM's modes and distributions. This doesn't represent the limit of Maverick AMM's capabilities: it is likely that sophisticated LPs will find any number of new situations where Maverick's customizable distributions can be put to specific use.

What follows is an overview of theoretical use-cases for Maverick AMM. In no way should this be interpreted as investment advice or a guarantee of specific returns. Most if not all of the strategies explored below require the individual LP to make a correct prediction of how the market will move. Maverick makes no guarantee that an LP's prediction will be correct. Providing liquidity–especially concentrated liquidity–always comes with a risk of loss. Please be sure to do your own research and understand the risks involved before using Maverick AMM.

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Basic strategies for movement modes

Maverick AMM features three movement modes: Right, Left, and Both. If an LP selects one of these modes, the AMM will automatically move their liquidity to follow price according to a certain set of rules. These rules can briefly be summarized as follows:

- Mode Right
- follows price when it moves right, doesn't move when price moves left
- Mode Left
- follows price when it moves left, doesn't move when price moves right
- Mode Both
- follows price in both directions
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Right and Left correspond to movements along a price axis in a given pool. For example, we can imagine a pool for two tokens–ABC token and XYZ token–and look at a hypothetical liquidity chart for this pool:

The AMM smart contract determines the pool price for the ABC-XYZ pool based on the amount of ABC and XYZ in that pool. As trades happen with the pool, the amount of ABC and XYZ will change. For example, if traders bring a lot of ABC and swap it out for XYZ, there will be more ABC and less XYZ in the pool. Trades occur at the current price, using the liquidity in the current active bin. In the chart above, the price is in an active bin which holds a mixture of ABC and XYZ.

Following our example, if traders swap ABC for XYZ, the balance in that bin will shift towards more ABC and less XYZ, until a point where the bin only holds ABC and the price moves into the next bin to the right so it can continue to supply XYZ to traders:

This is how the AMM understands Right and Left: the movement of price within a pool as the ratio of tokens in it changes. In the ABC-XYZ pool imagined above, a price movement to the Right will correspond to an increase in the price of XYZ and a decrease in the price of ABC. Conversely, a price movement to the Left will correspond to a decrease in the price of XYZ and an increase in the price of ABC.

Since all of the movement in these modes is automated by the smart contract, an LP using a movement mode does not pay gas fees when their liquidity is moved.

Directional Price Belief

If an LP has reason to believe that the price in a particular pool is going to move in a specific direction–that is, that the value of one token is going to increase in relationship to the other–they can use Mode Left or Mode Right to automate a strategy that has their liquidity follow that price movement.

For example, if an LP believes that XYZ token's market value vs. ABC will increase over time, they can use Mode Right to have a bin of liquidity follow the price movement and collect fees from trading activity in the pool. This LP would put ABC in a Mode Right bin directly to the left of the current active bin. If they anticipate a price movement in the opposite direction, they can reverse the strategy using a bin of XYZ in Mode Left.

✔Advantages:

Keeps capital in range and efficient

LP does not pay gas fees to move their liquidity

LP can stay largely exposed to a single asset

✖Drawbacks:

Requires LP to predict pool price accurately

High risk of impermanent loss if the price moves in the opposite direction

Considerations:

Mode Right and Mode Left only move liquidity in one direction; if price swings dramatically in the opposite direction, LP will likely need to rebalance manually

Sideways price belief

If an LP believes a particular token pair is likely to have a sideways price relationship (i.e., largely stable with subtle moves up and down), they can use Mode Both to keep their liquidity active and collecting as much fee as possible.

In our example pool, they would typically add liquidity to the current active bin in Mode Both. This will usually require a mix of both tokens, depending on the current state of that bin when they add liquidity.

✔Advantages:

Keeps capital in range and efficient wherever price moves

LP does not pay gas fees to move their liquidity

Well-suited to stablecoin pairs

✖Drawbacks:

Requires LP to bring both assets to the pool

Risk of permanent loss in the event of sudden price swing back and forth

Basic strategies for Mode Static

Maverick AMM also features Mode Static, which doesn't engage any of the automated liquidity features found in the movement modes. In Mode Static, your liquidity stays wherever you decide to put it. In this way, Mode Static is closer to the experience of adding liquidity to other range AMMs. Maverick AMM, however, gives LPs increased flexibility in choosing exactly how their liquidity is arranged in static distributions, making it more versatile and enabling a wider variety of strategies. Here, we explore just a few approaches Maverick LPs might take when configuring static liquidity distributions.

Exponential distributions

AHarvard study has shown that exponential distributions offer the best risk optimization for static liquidity provision. By placing the majority of their liquidity at the current price, and then spreading the rest of it in progressively lower amounts in the bins to either side, an LP can benefit from liquidity concentration while limiting their risk if price moves. This is why the exponential distribution is the default option when a user selects Mode Static in Maverick.

✔Advantages:

Presents good balance of concentrated liquidity and risk limitation

✖Drawbacks:

Static liquidity may require rebalancing if price moves out of range

Risk that liquidity on either edge of the range may never be utilized

Considerations:

It would require minting multiple positions NFTs to produce this distribution in Uniswap V3; Maverick lets you do everything with one

Flat distributions

If a user prefers something closer to the traditionalxy=k AMM, they can also choose a flat distribution that places equal amounts of liquidity in bins at each tick along the price range. This type of liquidity provision continues to enjoy favor due to the low risk of impermanent loss, but is very inefficient and can lead to high slippage for traders.

✔Advantages:

Can cover a broader price range for volatile pairs

Provides some protection against impermanent loss

✖Drawbacks:

Very inefficient, since most of an LP's capital will be out of range at any point in time

Considerations:

Staking wider ranges is very gas intensive

LPs may still have to rebalance if price moves out of range

Limit order

An LP can use a single bin of liquidity to mimic a traditional limit order, i.e., a buy or sell order at a particular price. If an LP has a bag of XYZ token they only want to sell if it hits a certain price, they can place all of those tokens in a bin at that price tick. The AMM will only let traders swap it to ABC if the price moves to that tick.

✔Advantages:

Lets users execute limit orders without a middle-man

Users can make a swap and collect fees for it, instead of paying them

✖Drawbacks:

LP could be swapped back if they don't remove liquidity before price changes

Considerations:

Users might want to compare the cost in gas fees between a simple swap and adding/removing liquidity to/from an LP position

"Dollar Cost Averaging"

While not precisely a Dollar Cost Averaging (DCA) strategy, LPs can use a flat static distribution to sell gradually from one token into another. For example, by placing equal amounts of XYZ at several ticks to the right of price in our pool, an LP can slowly let themselves get swapped to ABC as the value of their XYZ increases.

✔Advantages:

Lets users execute a buy-sell strategy without a middle-man

Users can make a swap and collect fees for it, instead of paying them

✖Drawbacks:

LP could be swapped back if they don't remove liquidity before price changes

Considerations:

AMM-based buy-sell strategies like this can be used to make large token buys without affecting market price in the same way conventional swaps will

Buy-Sell ramp

Similar to the DCA strategy above, this can be used to sell gradually from one token into another as price moves. The difference is that the DCA strategy sells the same amount of tokens at each price tick, while this strategy sells progressively more tokens as the price moves in the LP's favor.

✔Advantages:

Lets users execute a buy-sell strategy without a middle-man

Users can make a swap and collect fees for it, instead of paying them

✖Drawbacks:

User could be swapped back if they don't remove liquidity before price changes

User will swap more slowly than in DCA distribution

Considerations:

Token projects can use a distribution like this as a launch ramp to guide the price of their token to a desired point

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