

# Glossary

On this page you will find a glossary of terms used elsewhere in the docs.

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## AMM

An Automated Market Maker (AMM) is an on-chain smart contract that manages pools of assets, setting their prices and facilitating trades. These smart contracts take the place of market makers and managers in traditional and centralized exchanges, and offer transparent market automation governed by programmable rules.

AMMs rely on liquidity providers to deposit quantities of tokens into pools, which the AMM then takes the responsibility of managing. Traders make trades with the contract itself, rather than the liquidity providers or other traders. As a smart contract, an AMM can offer markets that are transparent, always-available, and that make trades permissionlessly and agnostically.

For a deeper dive on AMMs, read our [Maverick 101 blog post](#) about them!

## Fee APR

In Maverick's UI, you can see the Fee Annual Percentage Rate (APR) of individual bins in a pool. This number is calculated based on fees generated by the liquidity reserves in that bin over the last 24 hours. Since the APR is extrapolated from the previous 24 hour period, it is best understood as an indicator of historical--not future--performance.

Fee APR is provided for information only. It should not be understood as a promise of future returns. Always do your own research and understand your personal risks before providing liquidity.

## Impermanent Loss

Impermanent Loss or IL is a common DeFi metric used when measuring the profitability of an LP position. It basically equates to the value lost by an LP by offering their tokens for sale in an AMM vs. holding them in their wallet. For more information, see [this section](#).

## Permanent Loss

Maverick uses Permanent Loss or PL to describe a kind of risk specific to Mode Both positions. It is different from [Impermanent Loss](#) in that it represents a real and immediate loss to LP's reserves, not a theoretical loss pending withdrawal. For more information, see [this section](#) and this [detailed explanation of permanent loss](#).

## Price Impact

Price Impact refers to the change in the pool price that happens when a trader makes a swap with that pool.

Maverick AMM adjusts the price in every pool based on the ratio between the assets held in that pool. When a trader makes a swap, that ratio changes; if the ratio changes enough, it will also change the price. If someone swaps token A for token B, the pool will be left with more of token A and less of token B than it held before the swap. As a result, the price of token B will increase.

The price impact of a given swap depends on the size of the swap and the reserves held in the pool. A larger swap is likely to result in a higher price impact.

## Slippage

Most simply, slippage is when a trader receives a different price for a trade than they might expect. For example, when a user previews a swap in the UI, they might be quoted a price of 1.01, but when the transaction goes through they might actually end up paying 1.02. This is an example of slippage.

There are actually two components to slippage:

- Price Impact Slippage
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- this is the difference between the current price in the pool and the price a trader is quoted for their swap. It is called "Price Impact" because it reflects the impact of the trader's swap on the pool price. The larger the swap, the larger the price impact is likely to be.
- Transaction Slippage
  - this is the difference between the price a trader is quoted for their swap and the actual price they receive. This can occur when another trader submits a swap just before you submit your own. Since their swap will change the balance of assets in the pool, the price in the pool may shift, causing you to receive a different price than expected.

Maverick AMM is designed to limit both kinds of slippage. The high capital efficiency of Maverick pools limits price impact slippage, and the UI provides slippage checks to minimize transaction slippage.

The Maverick smart router will also make a smart search of available pools in order to give a trader the best possible price for their swap. Occasionally, this will mean routing a swap through a pool with lower liquidity and therefore higher price impact slippage if it means the trader will get a better price for their swap. But users can rest assured they are still getting the best price, even with slippage.

You can learn more about slippage in our [Maverick 101 blog post](#) about AMMs!

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