

Limit Order Tranches

Limit Order tranches are used to store liquidity in the form of limit orders. In addition to the `PairID`, `TokenIn` and `TickIndex` fields, Pools Reserves also have `TrancheKey`, `ReservesTokenIn`, `ReservesTokenOut`, `TotalTokenIn`, `TotalTokenOut` and an optional `ExpirationTime` field.

```
type LimitOrderTranche struct { PairID PairID TokenIn string TickIndex int64 TrancheKey string ReservesTokenIn sdk.Int
ReservesTokenOut sdk.Int TotalTokenIn sdk.Int TotalTokenOut sdk.Int ExpirationTime time.Time }
```

`TrancheKey` is a unique identifier for each `LimitOrderTranche`. `TrancheKeys` also represent a lexicographically sortable order in which tranches with a common `PairID`, `TokenIn` and `TickIndex` will be traded through. I.e. A tranche with `TrancheKey` "A1" will be traded through before a tranche with `TrancheKey` "A2". `ReservesTokenIn` is the available token that has been added to a limit order by the "maker" and represents the amount of `TokenIn` that can be traded against. `ReservesTokenOut` represents the filled amount of the limit order and can be withdrawn by the "maker"s. `TotalTokenIn` and `TotalTokenOut` are used to store the respective high watermarks for `ReservesTokenIn` and `ReservesTokenOut` and are used for the internal accounting of a limit order.

Lastly, `ExpirationTime` is an optional field used for Expiring limit orders (`JUST_IN_TIME` and `GOOD_TIL_TIME`). At the end of each block any `LimitOrders` with `ExpirationTime` \leq `ctx.BlockTime()` is converted to an `InactiveLimitOrderTranche` where it can no longer be traded against. [Previous Ticks Next Messages](#)