$ICHI & Fuse Pool 137

This research piece gathers various primary and secondary sources on the ICHI Foundation, recent events that unfolded with $ICHI, and the mass liquidation event in Fuse Pool 137, and will serve as a resource the Inverse RWG can refer back to when navigating and assessing risk in Rari Fuse Pools.

Ichi is a protocol best known for defending its token value with a "price wall". At the time of this writeup, the price of $ICHI is down 95.5% in a timespan of just 3 days, making it a noteworthy case study. The ICHI Foundation has issued a post-mortem that provides a timeline of events: https://medium.com/ichifarm/postmortem-of-pool-136-3cb22102065a

$ICHI Token

Ichi is supposed to be "currency for every community." Ichi ponzinomics relied on an up-only mechanism that relied on the issuance of stablecoins called oneTokens. Think MakerDAO but instead of major assets in, Dai out, it's: protocolToken in, oneTokens out.

Ichi incentivized the issuance of oneToken minting with promise of high APY. Stablecoins ultimately defend their peg with utility and oneTokens only utility (use case) was to have users buy more $ICHI.

Minting of oneTokens was done on a mix of volatile and stable collateral. The stable collateral is meant to defend liquidity at the peg and allow for some small portion of shitStables to be redeemed for the majors ($DAI, $USDC, $USDT). The volatile collateral goes into a community treasury to be governed by oneToken holders.

This reduces the sell pressure of the native token and puts it onto the oneToken. Sell pressure is reduced further by incentivizing ICHI-OneToken LP with high APYs (the Pool2 playbook): Pool2's work to prop up price with liquidity, staking, and farming rewards.
- Liquidity so price can absorb sell pressure
- Staking to increase the friction of selling
- Farming to incentivize staking

So far this isn't that different from most ponzinomics. What set ICHI apart is their "price wall".

From their docs: "Angel Vaults use Uniswap v3 concentrated liquidity to establish a wall of liquidity directly under the price of a project's token."

Here's how Angel Vaults work:

Users put in $ICHI and the oneToken of their choosing (the largest pool was oneUNI). Ichi then use that liquidity to establish deep Uni v3 liquidity right beneath the current spot price. Rather than optimizing liquidity around the spot/market price, Ichi poured all the liquidity out of range below spot, leaving thin liquidity for the price to run up. Once the price moves up, they withdraw the liquidity wall and re-establish it right under the spot price.

Rari Fuse Pool 136

As a reminder, Fuse is a permissionless lending protocol. The teams that create pools tune the parameters of the pool themselves and each pool has an isolated set of risks. This can make it difficult to navigate risk but effectively doing so can be very profitable. Operators set constraints, most important of which is collateral ratio: "How much collateral do you have to pledge against your borrow."

Ichi set up a fuse pool where they set their CF for all native assets to 85% (!). Meaning, for every dollar of supply--including oneUNI-$ICHI LP tokens--you could borrow up to 85%:

The loop:
1) Convert funds to oneUNI and $ICHI
2) Commit both, receiving oneUNI-ICHI LP
3) Supply oneUNI-ICHI LP to the Rari pool
4) Borrow up to 85% LTV in stables
5) Repeat

As a result of low $ICHI out-of-range liquidity and intense levered long buy pressure and recursive borrowing, $ICHI price jumped from $20 to $145. At the same time, borrowers' collateral was worth even more now that $ICHI price skyrocketed. Meaning more leverage and more buying. Problem is, all the collateral being pledged meant there were tens of millions in outstanding borrow, but relatively thin liquidity on Uni v3. A recipe for disaster. When the price began to decline, there was insufficient DEX liquidity to support liquidations. A liquidation cascade hit the Rari pool, leaving lenders in the pool heavily undercollateralized. The cascading liquidations were so bad the situation prompted a response from Fei-Rari CEO Joey Santoro.

The deleveraging process:

- Someone dumps $ICHI at the top
- Everyone's $ICHI-denominated collateral sinks in value
- Loans are liquidated, forcing $ICHI sales into thin liquidity
- DEX liquidity dries up
- Pool is undercollateralized
- Lenders get rugged

With 100s of millions of dollars as collateral and tens of millions borrowed, when the price began to decline there wasn't enough DEX liquidity to foster liquidations. Thus, highly levered positions couldn't be closed. Thus, the pool was left with bad debt.
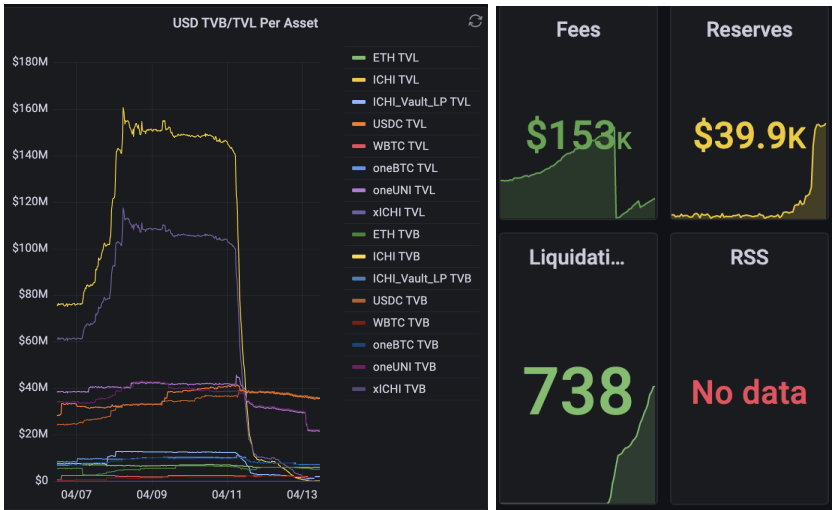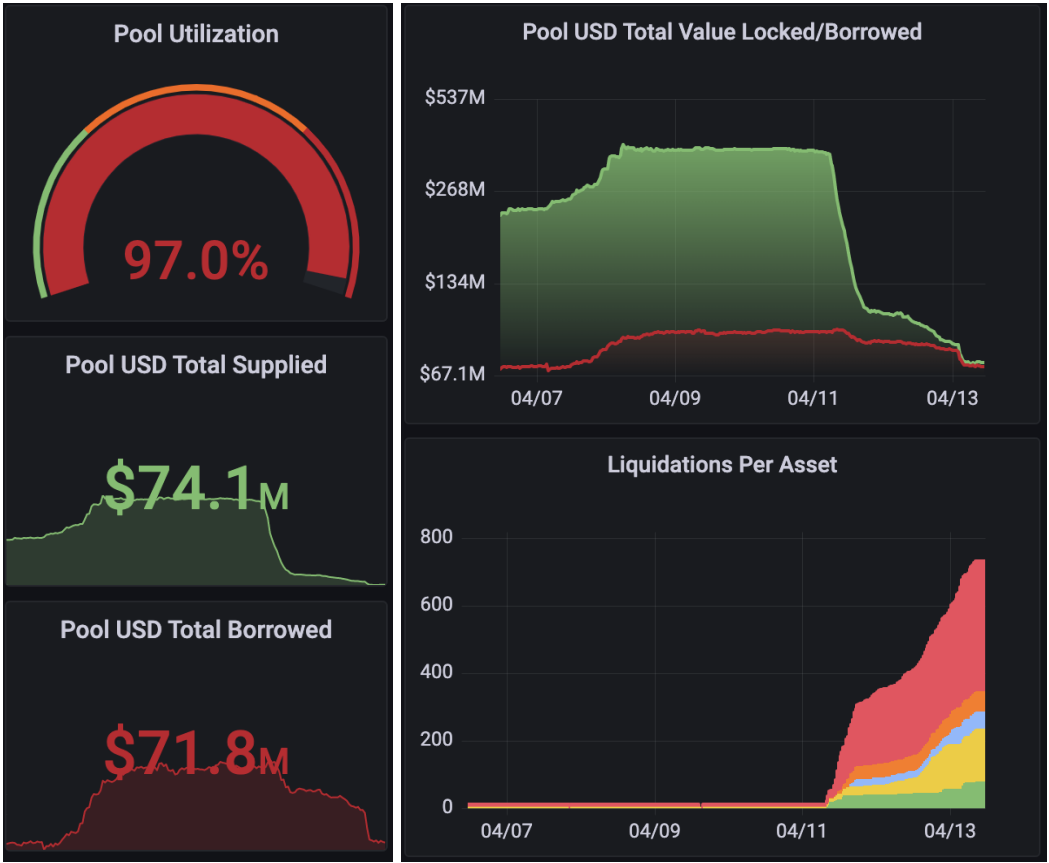
Key Takeaways

As a user of Fuse, if you see collateral in a pool significantly in excess of what can be liquidated this is a red flag. Cascading liquidations can cause the price to decline quickly, dry up the liquidity, and leave the pool with bad debt.

The $ICHI team had a few options to prevent this outcome. First, they could have set a safer collateral factor. 85% on a volatile asset is almost unprecedented. This allowed users to borrow a very significant amount against their collateral. Second, they could have added supply caps to limit the amount of collateral in the pool. Finally, they could have increased the liquidity in the market for $ICHI to reflect the significant activity in the pool.

1. Stablecoins need utility
2. Incentives to hold are not sustainable
3. Don't lend into risky pools with low collateral
4. Defending price with a few buy orders is not sustainable
5. Build something useful.