

Crypto World Summit

Hunting the Bear:

Yield Farming for Fun and Profit

John Nguyen
Ninja Software CTO
Unqualified Bear Hunter
"I just like the tech"



Who am I?

- John Nguyen
- Mining engineer (Piping, Mechanical, Process Controls, Industrial Networks)
- 15 years programming experience
- Ninja Software CTO and Co-founder

TECH SOCIETY
DECLARER

HOLY WAR

ON
BITCOIN

WITH: NEAL CROSS & DR. GOV VAN EK

TECHSOCIETY.FM

LISTEN ON:



A photograph of a man in a white hard hat and a yellow high-visibility safety vest with reflective stripes. He is standing outdoors on a dirt surface next to a large, dark-colored industrial pipe. In the background, there is a paved area and some trees under a cloudy sky.

Who am I in crypto?

- 9 years in crypto (since 2013)
- Ghana deployment
 - Bought BTC for \$100
 - Bartered goods for BTC
 - Developed algorithmic trading bots on Mt Gox
 - Lost a lot of money!



Sat, Apr 20, 2013, 6:51 PM



Yeah but I need it for this holiday. When I come back in two weeks we can trade for it if you like? I'll give it to you for whatever 200usd worth of btc when I come back to Accra .

I also have a genuine Swiss watch that I bought for 700usd. Tissot brand. I'll sell it to ya for 5btc.

...

[Message clipped] [View entire message](#)





Who am I in crypto (cont.)?

- Crypto-steel and cold storage
- Entered hibernation after blocksize wars
- Developed blockchain forensics and applications
- Advise on private funds (PBS investments and others)
- Member of Perth Cypherpunk Council

Today's talk

- Yield farming via liquidity provisioning
- Using Uniswap V3, the most cutting edge AMM
- Covering:
 - Position discovery
 - Range types
 - Position maintenance

Why bother?

- Extremely high yields
- React to changing market conditions
- Less competition from other yield farmers

Pre-requisites

- This is an *intermediate* talk
 - Understand how to use MetaMask and other wallets
 - Self custody of crypto
 - Gas fee management

A super fast primer into DeFi

Hold on to your hats!

What is the blockchain?

- Decentralised triple entry ledger
 - Reversed linked list structure of blocks, each containing:
 - Block header containing metadata and a hash pointer to the previous block
 - Cryptographically verified transactions, each containing:
 - Simple value transfer (Bitcoin UTXO); or
 - More complex smart contract invocation (Ethereum)

Blockchain security is backed by consensus mechanisms (Proof of Work, Proof of Stake), secured by incentivised miners or stakers.

What are smart contracts?

- Programmable value!
- NOT a legal contract or agreement
- Functions that are deployed to the blockchain that interact with other deployed contracts or wallet addresses
- Programs that execute logic and deal with the transfer of value

What is Decentralised Finance (DeFi)?

- Fastest growing sector within blockchain technology
- Trustless financial tools
- Protocols instead of companies
- Shared state instead of silo-ed data
- Lend, borrow, trade, insure, do all sorts of things!

No middlemen, no vetting, no blockers

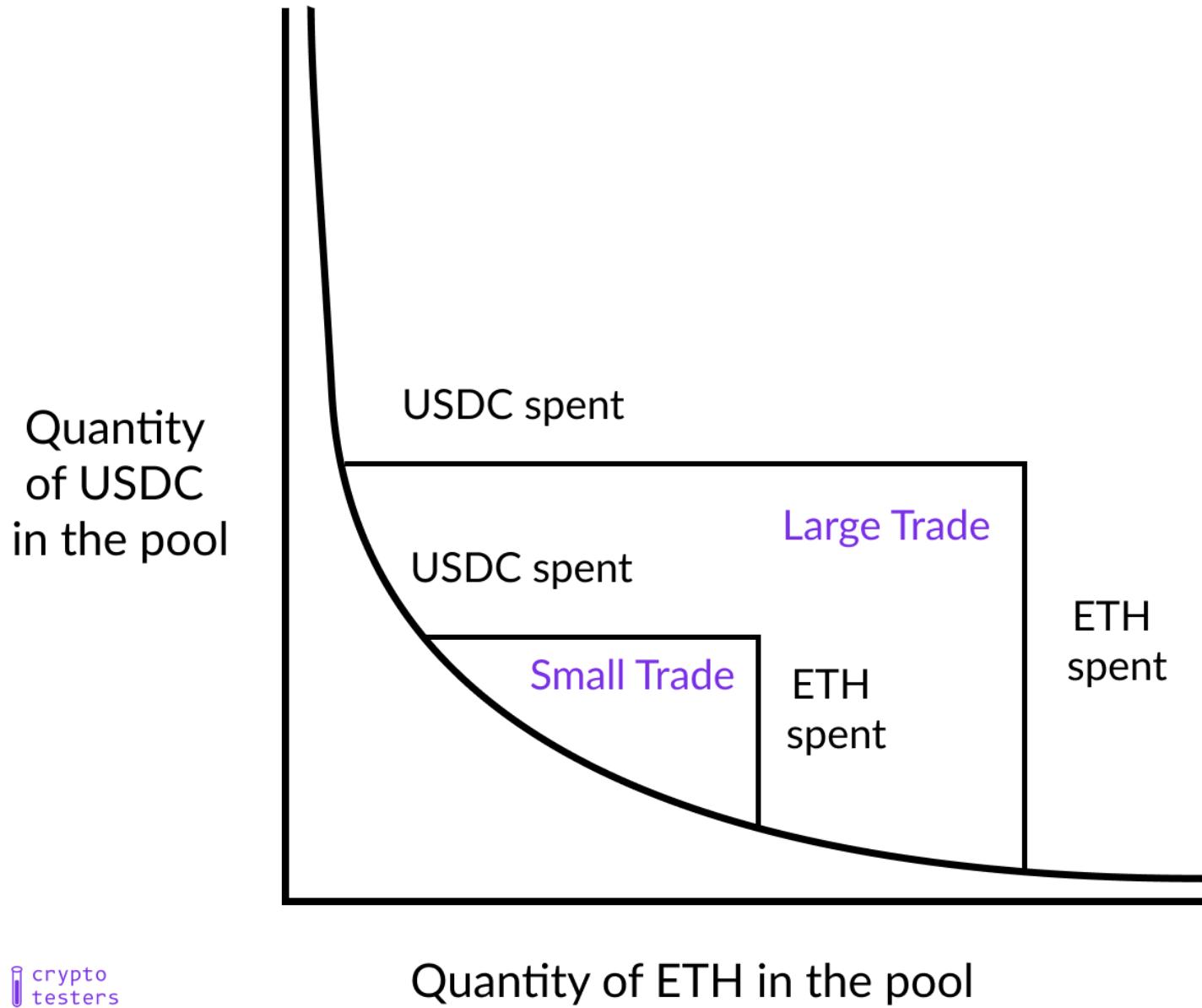
What is Yield Farming?

- The art and science of combining the money legos of DeFi to maximise yield
- Tokenised *everything*
 - Lending tokens
 - Borrowing tokens
 - Derivative tokens
- We can use these tokens and interoperate with different DeFi protocols in weird and wonderful ways

What is an Automated Market Maker (AMM)?

- Liquidity pool for swaps
- Two main parties:
 - Traders swaps between pairs
 - Liquidity providers can provide liquidity, receive fees and token rewards
- One of the blocks (money legos) for yield farming
- A few examples: Bancor, Balancer, Sushi, Uniswap V2/V3

What is an AMM (cont.)?





What is Uniswap V3?

- One of the most popular AMMs
- New version of Uniswap
- Highly capital efficient
- Liquidity providers create positions with a min and max value
- Can function as limit orders, avoiding slippage

What is a position?



- A limit order that executes over a price range
- You provide liquidity on a pair (e.g. ETH/USDC) for other users to swap against

What is a position (cont.)?



- While the market price is within your range:
 - Fees are generated (0.3%)
 - Your liquidity slowly shifts from one to the other
- While the market price is outside your range:
 - No fees are generated
 - Your liquidity is one-sided (100% ETH or 100% USDC)

How do I choose a position?

- Step 1: Select pair
- Step 2: Select position type
- Step 3: Select position range
- Step 4: Deploy your position
- Step 5: Maintain the position

Step 1: Select Pair on Dune Analytics

An Ethereum analytics platform that is community driven.

Min Pair Volume - M 5

2 Min LP TVL - k 10

Min LP Fees - k 1

4 LP Status All

5 Fees All Tiers

Include All Tokens

7 Exclude SHIB, LEASH

The filters above apply to the 'LP Position Discovery' Section only (unless otherwise noted). // You may have to refresh the page after clicking 'Apply' for the filters to take effect. //

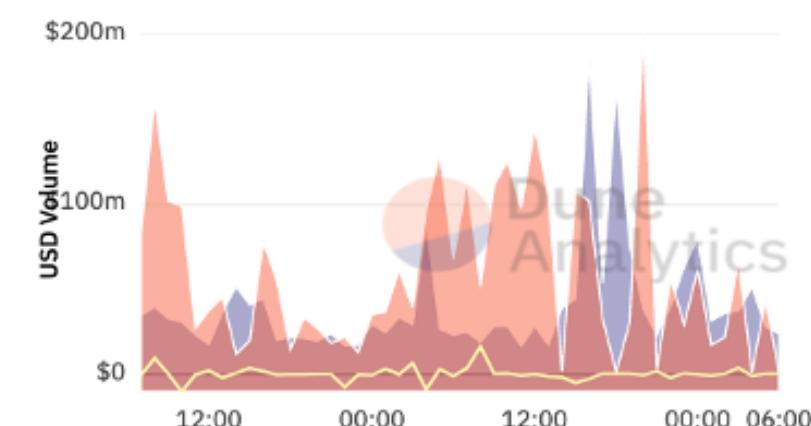
Day Volume
(All) Uni v3 - 2D

\$1.93B
Trade Volume (All Pairs)

2 Days Fees
(All) Uni v3 - 2D

\$3.25M
LP Fees (All Pairs)

Hourly Trade Volume, Fees, Liquidity Added Uni v3 - 2D Time Series



Day Volume
(T15) Uni v3 - 2D

\$1.63B
Trade Volume (Top 15 Pairs)

2 Day Fees
(T15) Uni v3 - 2D

\$2.39M
LP Fees (Top 15 Pairs)

2 Day - Added
LP Uni v3 - 2D

\$2,858.69M
Added Liquidity Volume

2 Day - Net LP Uni
v3 - 2D

\$23.65M
Net New Liquidity

Liquidity Volume: Total 'Liquidity Added' to Uni v3. Aims to measure the activity of active LPs.

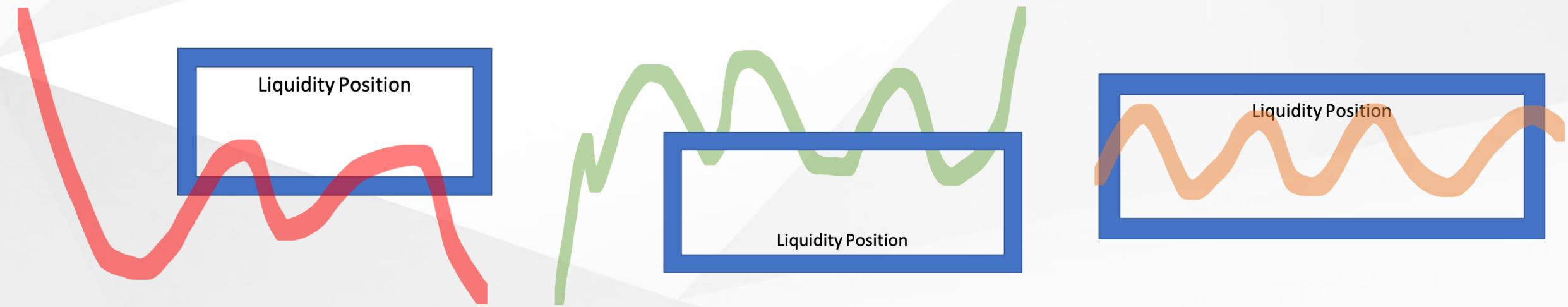
Net New Liquidity: 'Liquidity Added' - 'Liquidity Removed'. Aims to measure change in

Step 1 (cont.): Select Pair on dune

Aim for high volume, high fees/TVL, high #trades and solid project fundamentals.

Pair	Total Fees	Trade Volume	Current TVL	Fees/TVL	Agg APY	# Trades
FEI/ETH	\$18.7k	\$6.2m	\$20.1k	93.00%	16.9k%	110
USDC/WBTC	\$6.2k	\$12.4m	\$70.3k	8.80%	1.6k%	1,120
AXS/ETH	\$156.3k	\$52.1m	\$2.9m	5.30%	968.60%	6,962
SLP/ETH	\$53.3k	\$17.8m	\$1.2m	4.50%	814.00%	4,543
OHM/ETH	\$11.6k	\$1.2m	\$261.7k	4.40%	805.40%	405

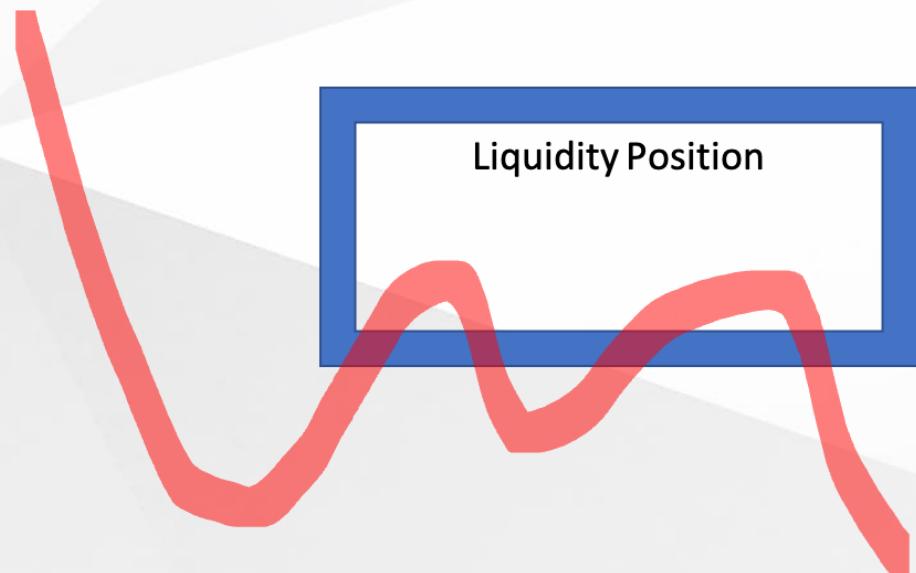
Step 2: Select position type (Over, Under, In-Range)



Position Type: Over

Good for bear market.

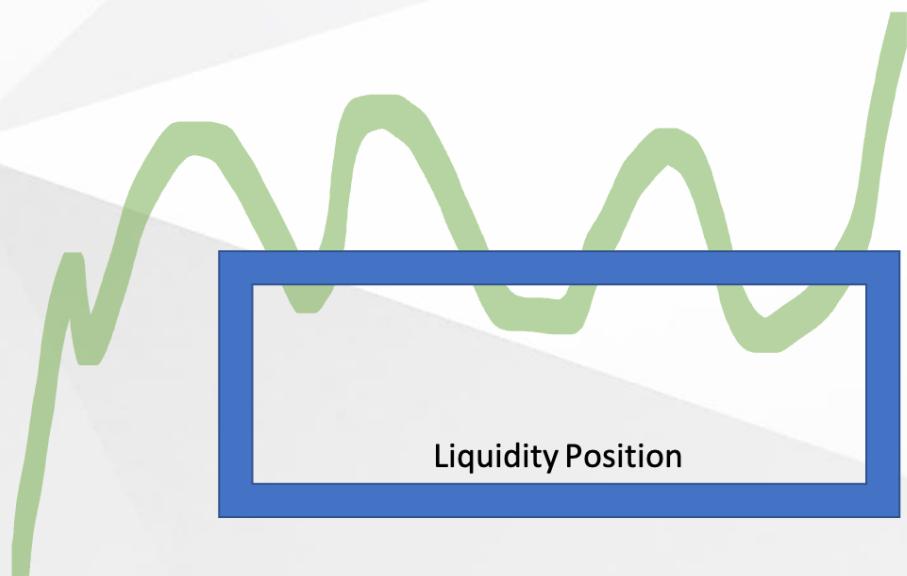
- Capture increases in price
- Low risk fee accrual



Position Type: Under

Good for bull market.

- Capture dips in price
- Low risk fee accrual



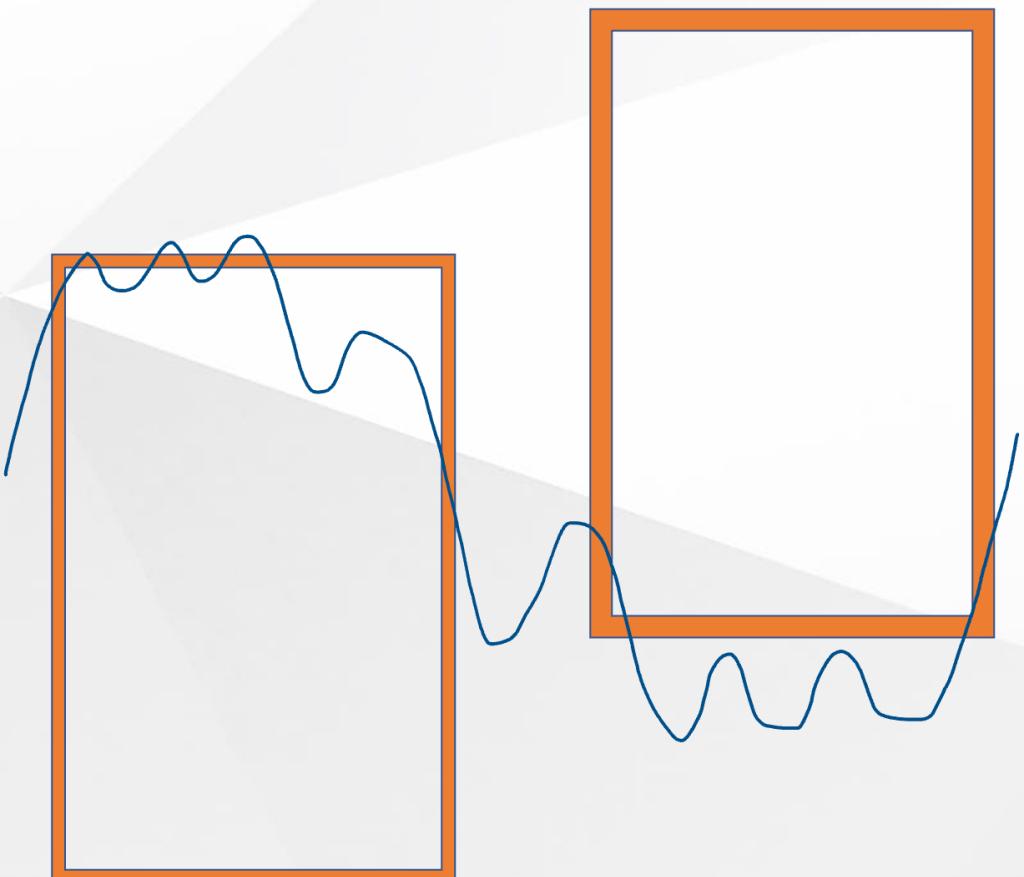
Position Type: Within Range



Good for sideways market.

- Capture fees from volatility
- Automatic rebalancing
 - "Sell" on the way up
 - "Buy" on the way down
- Medium risk fee accrual (breakout risk)

Advanced Position Types (Daytrade)



- Time the market: Not recommended!
 - Close positions when the price crosses over
 - Open new position on the other side
 - Farm volatility for capital gains

Step 3: Select position range with a min and max price

- This depends on price volatility
- High volatility requires larger ranges
 - Greater exposure to price increases
 - Reduced fees
- Low volatility requires smaller ranges
 - Greater exposure to price increases
 - Increased fees



Uniswap V3 Fee Calculator

Data from Velocity by Flipside Crypto [Twitter](#) [GitHub](#)

change the inputs on the left, see current swaps & liquidity + estimate fee income on the right, read disclaimer at the bottom

Select Pool

OHM-WETH 1% fee ▾

To search, select the dropdown, hit backspace/delete and type

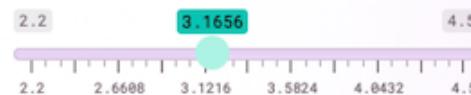
Last Pool Update: 2021-07-22 06:53:38 UTC

19 Open Positions

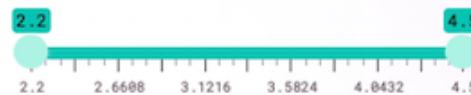
24 Hour Swap Volume: \$618,973

Current Price: 3.16560555761048 OHM per WETH

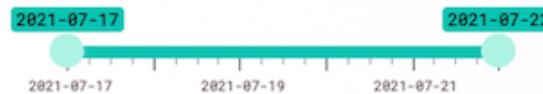
Move Active Price Assumption



Select Liquidity Bounds



Select Swaps Date Range



Simple Daily Fee Estimate:

Investment \$ Here

2000

24h Fee \$ (annual %)

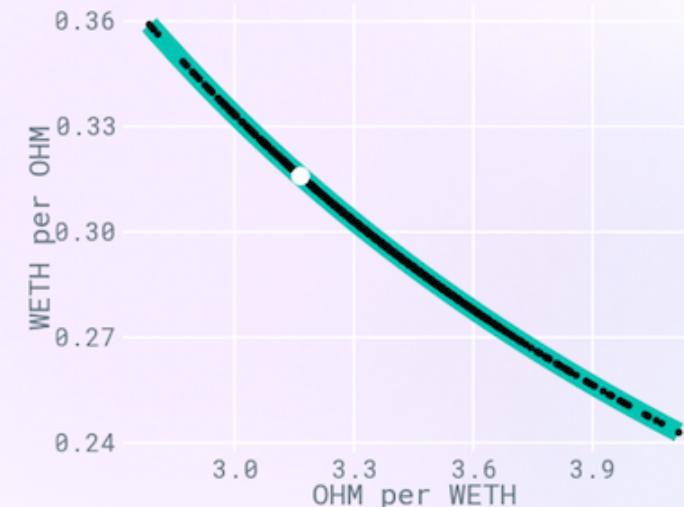
\$29.14 (531.81%)

GO ↗



Swap Curve

100 % Swap Volume Covered



Liquidity Positions

0.47077% of Total Virtual Liquidity



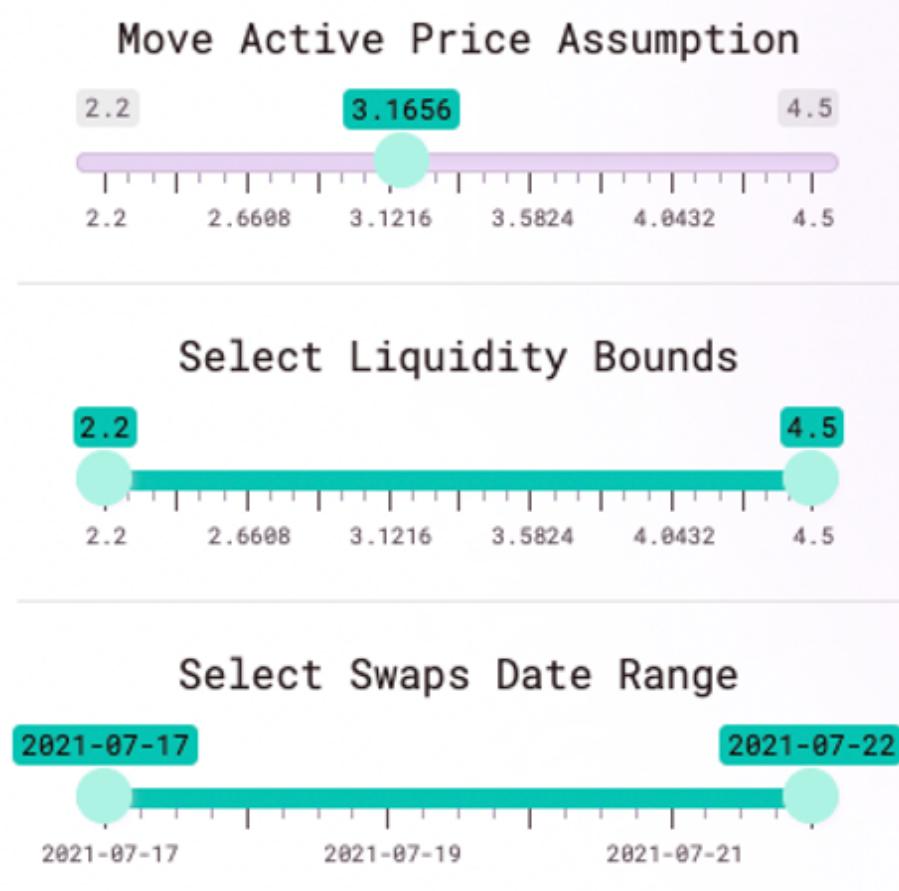
Prices Last 5 Days



5 Day Swap Volume (\$MM)



Step 3 (cont.): Select position range



Set your inputs

- Price Assumption
- Min max price
- Swap volume date range

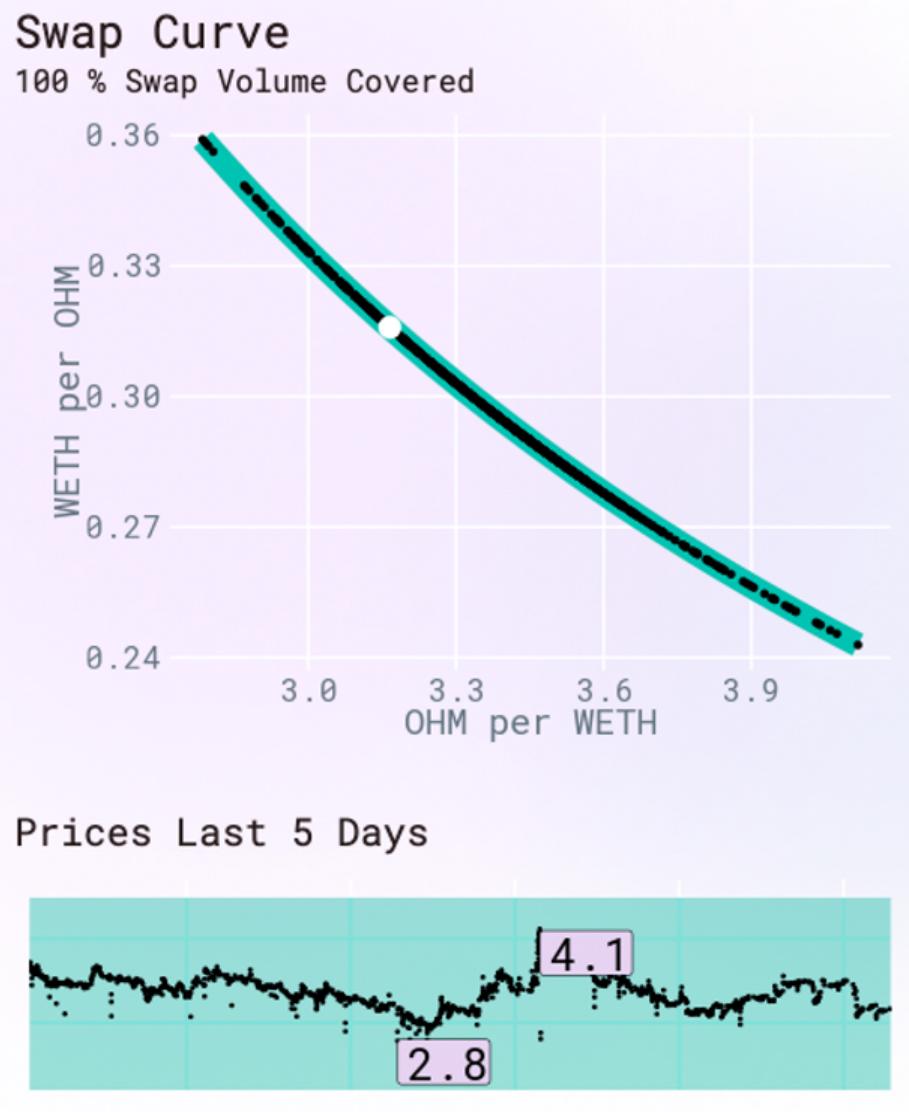
Step 3 (cont.): Select position range

Enter investment amount

- ~\$30 per day of fees will be generated with the current settings

Simple Daily Fee Estimate:

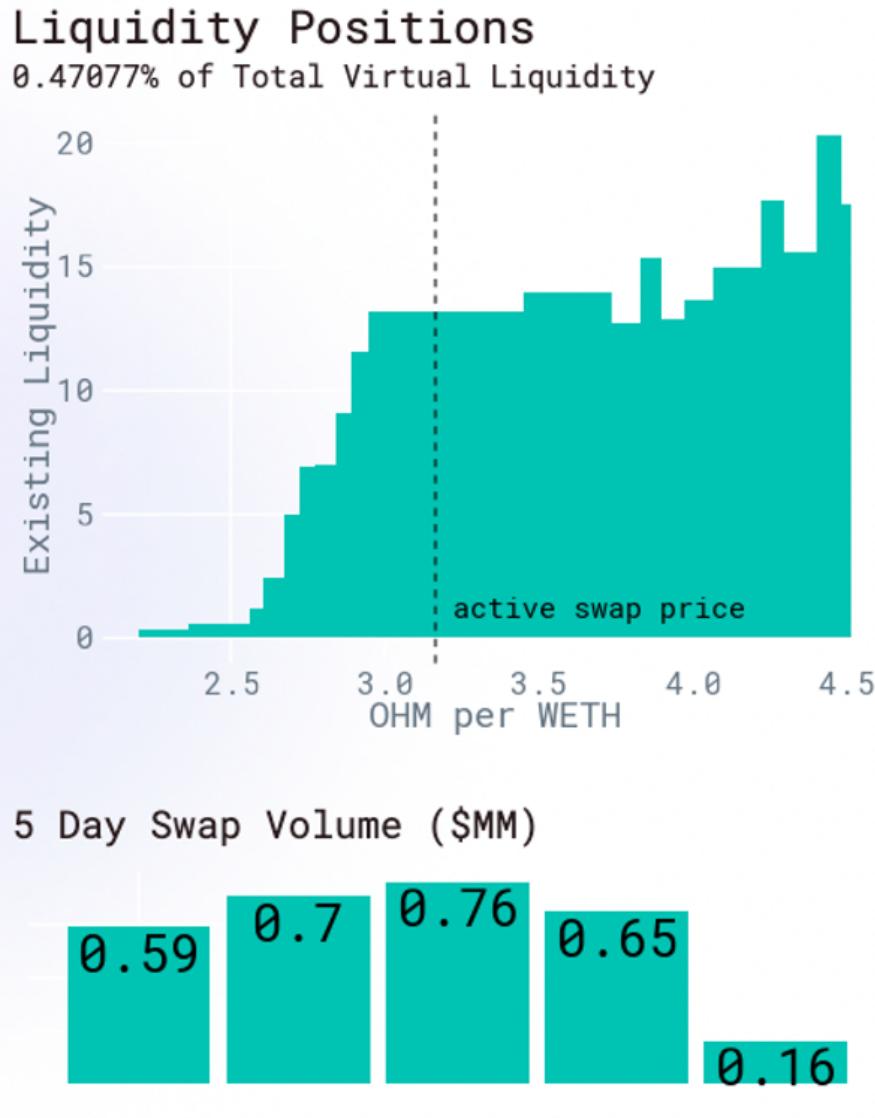
Investment \$ Here	24h Fee \$ (annual %)
2000	\$29.14 (531.81%)



Step 3 (cont.): Select position range

Review the swap charts

- 100% of volume covered
- Lookin' good!



Step 3 (cont.): Select position range

Review liquidity charts

- 0.4% of virtual liquidity (not too diluted or concentrated)
- Reasonable volume (~\$600,000 per day)

Step 3 (cont.): Select position range

Play with the values in Flipside crypto to optimise your risk/reward.

Position summary:

- Range: 2.2OHM to 4.2OHM
- Volatility: 100% of 5 day price captured
- Fees: 29USD fees generated per day for 2000USD investment

Step 4: Deploy your position

Now it is time to deploy to Uniswap V3!

Make sure you have enough ETH in your wallet to pay the gas fees.

You may need to purchase one or the other token in the pair to be able to fund the position.



Add Liquidity

[Clear All](#)[OHM](#) [ETH](#)

Select Pair



ETH



OHM



1% fee tier

[Edit](#)

100% select

Deposit Amounts



ETH

0.0

Balance: 0.3779 ETH (Max)



OHM

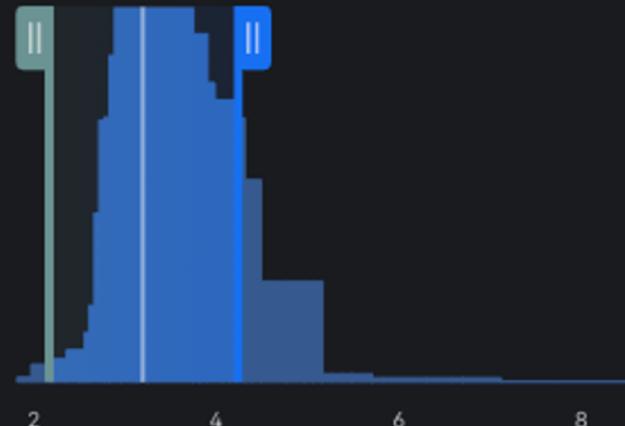
0.0

Balance: 0 OHM

Set Price Range



Current Price: 3.20545 OHM per ETH



0 2 4 6 8

Min Price



2.1908



OHM per ETH

Max Price

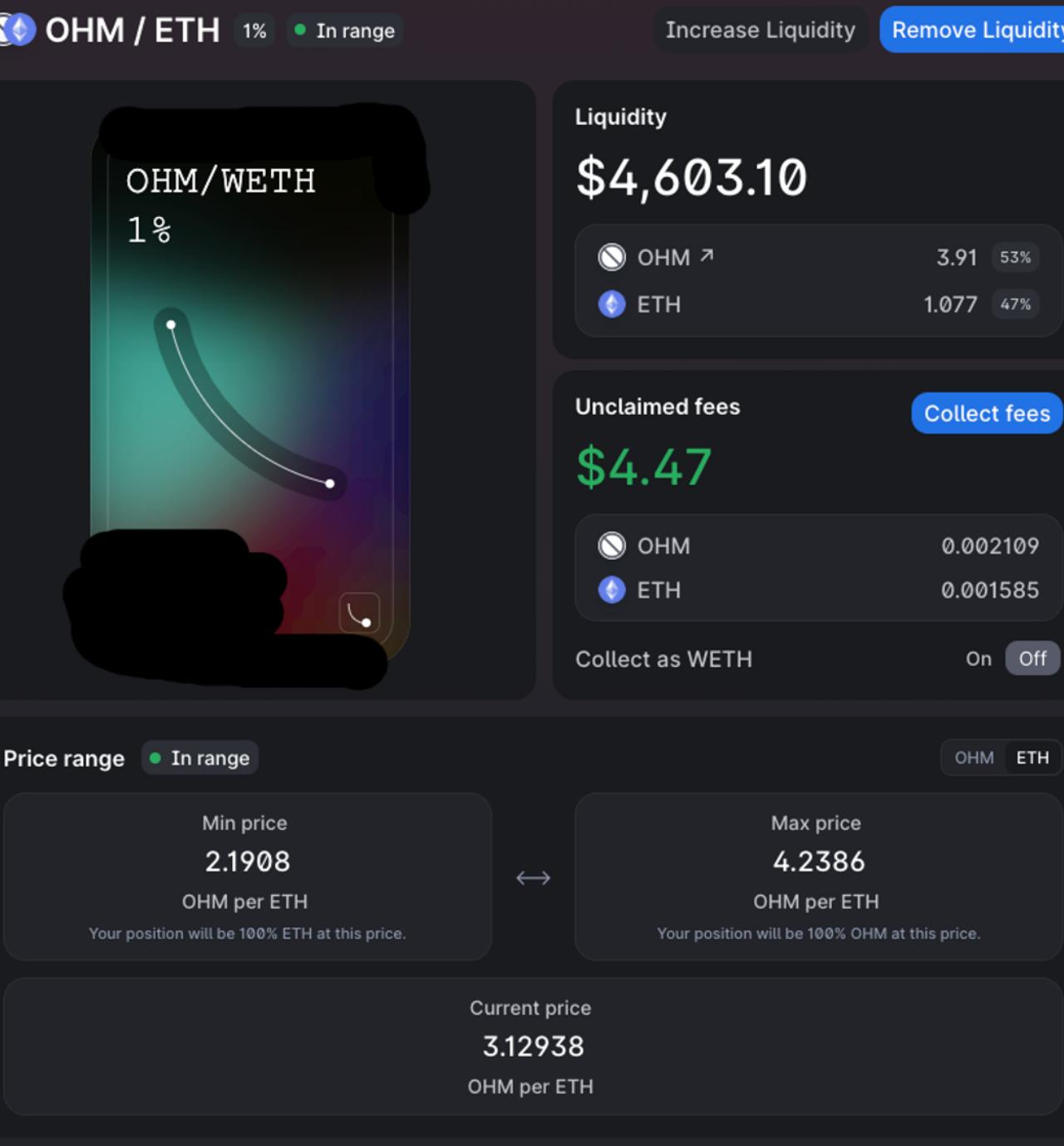


4.2386



OHM per ETH

[Enter an amount](#)



Step 5: Maintain the position

- Claim fees and compound
- Exit and redeploy after crossing over
- Exit and redeploy to chase the price
- Collected about 250USD over a week

Risk 1 - Impermanent Loss

Price moves from one side of a position to the other, it is the equivalent of executing a limit order

Impermanent loss is only realized if you exit your position

- It will always be on the “wrong side”
 - If OHM goes to the moon, you will have 100% ETH
 - If ETH goes to the moon, you will have 100% OHM

Mitigation 1: Long both tokens so you'll be happy either way

Mitigation 2: “Chase” price (take profit/stop loss) by closing and opening new positions

Risk 2 - Volatile Market

- DeFi tokens are extremely volatile
- Reported APY is always changing
- Market can move the wrong way, requiring repositioning
- Gas fees will eat at your profits until roll-ups become more common

Risk Mitigation

Verify that a project has satisfied the 5 fundamentals of a good DeFi system

- Community
- Tokenomics
- Leadership
- Security
- Open source

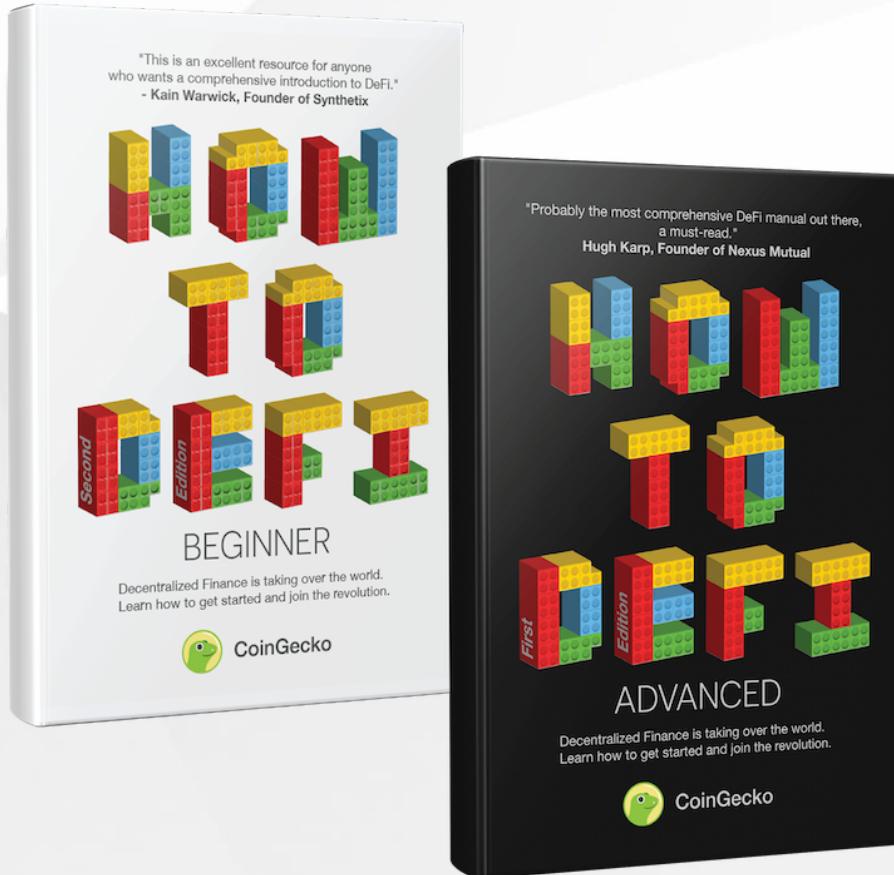
Come and see me if you want to learn more about DeFi due diligence.

What next?

We've barely scratched the surface of yield farming!

- Liquidity provision into traditional AMMs (Balancer)
- Hunt for airdrops (UNI)
- Save gas with rollups (Optimism)
- Bond and stake LP tokens for additional rewards (Gysr)
- Leverage with Compound Finance and IndexCoop (ETH2X-FLI)
- Invest in indexed tokens (DPI, BED)
- Increase yield with recursive borrowing (Compound)

What next (cont.)?



- Read some books (CoinGecko)
- Single sided staking (OHM)
- Buy some NFTs (OpenSea)
- Look into fixed income protocols (Pendle)
- Buy insurance (Nexus)
- Program your own smart contracts (Solidity)!

Contact me

Happy to chat over a coffee about anything to do with crypto, NFTs, software engineering and app development.

- Email: john@ninjasoftware.com.au
- Twitter: @nii236



ALEX DUNMOW

CHIEF EXECUTIVE NINJA

STRATEGY, VISION

An idea is worthless without the drive and the funds to make it a reality. Great technology is when art and logic intertwine. Success is reserved for the team with the courage to execute and the passion to see it through.

There is no stronger power than technology to create multi-generational wealth and challenge the status quo.

"Creation is an act of sheer will." - John Hammond



JOHN NGUYEN

CHIEF TECH NINJA

STRATEGY, TECHNOLOGY

Many believe cryptocurrencies are new, but they've been around longer than you'd think. Those that have been here from the beginning know of its possibilities, its pitfalls, and the hidden value yet unknown to the wider world.

"If crypto succeeds, it's not because it empowers better people. It's because it empowers better institutions." - Vitalik Buterin



*Come get a
limited edition
NFT!*