

Ponzinomics*

*Any references to “ponzis” or “ponzinomics” are a joke, and should not be interpreted as either indictments or endorsements of any protocols mentioned, or as investing advice

Anthony Lee Zhang

April 14, 2024

Equity Issuance in Tradfi

- ▶ This lecture is about “tokenomics”, airdrops, and yield farming/token emissions
- ▶ How do defi protocols issue “equity”? How do they decide how to distribute to users?

Equity Issuance in Tradfi

- ▶ This lecture is about “tokenomics”, airdrops, and yield farming/token emissions
- ▶ How do defi protocols issue “equity”? How do they decide how to distribute to users?
- ▶ In tradfi, equity issuance is hard!
 - ▶ Public markets (publicly listed firms): harsh disclosure requirements, SEC closely regulates, etc.
 - ▶ Private markets: limited to accredited investors, liquidity issues, cannot tokenize due to accredited investor status

Equity Issuance in Defi

- ▶ “Equity-like” issuance much simpler in defi!*
- ▶ Issue a ERC20 token
- ▶ (Potentially) Direct (or imply) future cash flows, governance rights, etc. to be based on the ERC20
- ▶ Another big benefit over tradfi: can target equity drops based on certain things, like usage, which is on-chain
- ▶ Regulatory uncertainty is a barrier!

*Not legal or investing advice!

Lecture Plan

- ▶ The Sushiswap vampire attack, Uniswap
- ▶ Retroactive airdrops
 - ▶ Sybil attacks and resistance
- ▶ “Yield farming”, emissions
 - ▶ Curve, the “market for bribes”
- ▶ Olympus
- ▶ Takeaways

Sushiswap vampire attack

- ▶ 28 Aug 2020: Sushiswap launches, “forked” (copied open-source!) uniswap code
- ▶ Same functionality as UNI - but **pays liquidity providers!**
 - ▶ New SUSHI token paid to uni LPs who “stake” tokens with Sushi, has governance rights, and gets revenue from SUSHI trade fees
- ▶ Then, a “migration contract” converts Uni LP tokens into Sushiswap LP tokens
- ▶ **\$150mil** migrated within hours! Stole over 50% of Uniswap’s liquidity!
- ▶ 1 Sept: Binance lists SUSHI tokens
- ▶ Some drama around the Sushiswap devs rugging, and project control is transferred to **Sam Bankman-Fried**, in **this tweet**

Another **good reading**

The Uniswap Airdrop

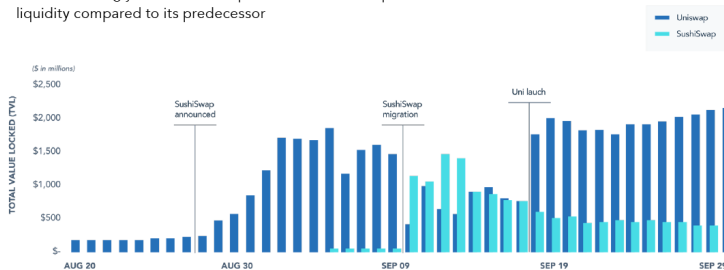
- ▶ In response, on **September 16, 2020**, Uniswap announces launch of governance token, UNI. 60% tokens reserved for “community” (users)
- ▶ 15% of total supply distributed retroactively to Uniswap users!
- ▶ Min. airdrop **400UNI**, worth over \$1000 USD!
- ▶ 45% reserved for future user incentives

Sushiswap and Uniswap



Total Value Locked in Uniswap vs. SushiSwap

After a seemingly succesful “Vampire attack” SushiSwap has failed to retain liquidity compared to its predecessor



As of Sep 30, 2020 • Source: DeFi Pulse

Source

Sushiswap and Uniswap

- ▶ Moral of Sushi/Uni saga?

Sushiswap and Uniswap

- Moral of Sushi/Uni saga?



- If you don't release a token, we'll clone you and add a token, and beat you
- These 2 were early examples of “yield farming/emissions” (Sushi) and “retroactive airdrops” (UNI). Rest of lecture goes into each of these in detail. . .

The Airdrop Sybil Wars

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- ▶ Airdrops are often not directly proportional to usage (why?)

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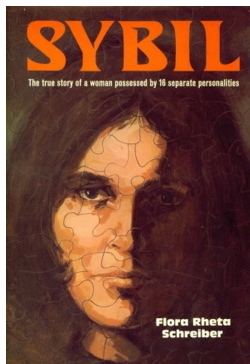
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- ▶ Airdrops are often not directly proportional to usage (why?)
 - ▶ Want token distribution to be more “democratic”, not too much whale control
- ▶ But if they give you one airdrop per wallet... Make more wallets!
- ▶ Referred to as a **Sybil attack**



The Airdrop Sybil Wars: Ribbon Finance

- ▶ **Ribbon Finance**, a structured products protocol, did a retroactive airdrop in Oct 2021
- ▶ Ribbon told VC Divergence Ventures, which invested \$25k in Ribbon, about the upcoming airdrop
- ▶ A Divergence Ventures analyst then made a huge number of wallets, making \$2.5mil from Sybil attacking the airdrop!
- ▶ **People were not happy!** Divergence eventually **sent the ETH back to Ribbon**
- ▶ Interesting lesson also about defi community culture and standards!

References: **Coindesk** and **Crypto Briefing** articles

The Airdrop Sybil Wars: Ribbon Finance

We are sorry for Sybil-ing. We lost sight of the fact that there is more to the "game" than making money. The "game" is a win-win one and we treated it as zero sum. You can say "you returned the money because you got caught", and that is TRUE. We were blind to the fact that it's not okay, and we needed someone to rip us one to see the light. Look, you and I both know we aren't the only one that has tried this tactic. By tearing us apart, you are policing every other actor in the space. It's a good thing. I feel sad, and bad, and terrible, in many ways, but I understand why this is happening and I know that it's long-term good for the space as a whole.

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- ▶ Other regulatory barriers also: **dYdX**, a derivatives protocol, did a huge airdrop (Over \$50k USD some users!), but **filtered out US IP addresses**
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Airdrops: technology

- ▶ Airdrops enabled by the possibility of targeted based on verified on-chain data
- ▶ Imagine: see every thing a person ever bought, use this to target equity drops!
- ▶ Across all company boundaries (SOS used Opensea data)
 - ▶ Marketing implications: free targeting your competitors!
- ▶ Sybil attacks, defense, etc.
- ▶ No/low chance of "lost in mail"

Governance responsibility, community

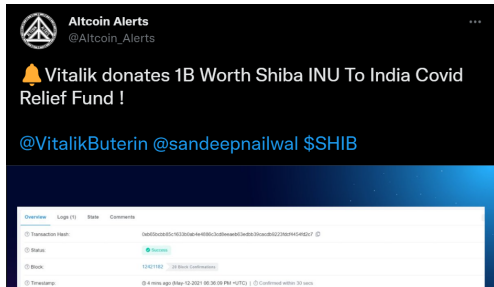


Aside: Vitalik, SHIB, and COVID India

- ▶ In 2021, was popular to launch dog meme coins, which had no purpose, but somehow still had value
- ▶ Was popular to airdrop a large % of meme coins to Vitalik Buterin, whose address is public
- ▶ Vitalik faces a difficult problem!
 - ▶ Hodl coin? Tax implications, etc.?
 - ▶ Sell coin? Accused of dumping on retail?

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 - ▶ Hodl coin? Tax implications, etc.?
 - ▶ Sell coin? Accused of dumping on retail?
- ▶ Vitalik's **solution**:



The image shows a tweet from 'Altkoin Alerts' (@Altkoin_Alerts) with a bell icon, stating: 'Vitalik donates 1B Worth Shiba INU To India Covid Relief Fund !'. Below the tweet text are the handles '@VitalikButerin @sandeepnailwal \$SHIB'. Underneath the tweet is a detailed view of a transaction on a blockchain explorer. The transaction hash is '0x050cbb85c163303d4e4686c3d8eae6b1edba30ca0d02236c94546d47'. The status is 'Success'. The block number is '12421182' and it shows '38 Block Confirmations'. The timestamp is '4 mins ago (May 12 2021 06:36:09 PM +UTC)' and it is 'Confirmed within 30 secs'.

Altkoin Alerts
@Altkoin_Alerts

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Overview	Logs (1)	State	Comments
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Emissions/Yield Farming/Liquidity Mining

- ▶ Besides retroactive airdrops, projects also commit to printing token rewards for their users, like Sushiswap
- ▶ “Yield farming” sometimes refers to these
- ▶ For AMMs, “liquidity mining”
 - ▶ “Mine” governance tokens, not through PoW, but by providing liquidity, LP-ing, an AMM

Yield farming

- ▶ **Compound finance**, a lending protocol, distributes tokens to lenders in Feb 2020 (earlier than Sushi!)
- ▶ Other early liquidity incentives projects: **Synthetix** (derivatives), **Yam finance**, **balancer** (AMM), and many others
- ▶ Mainly, lending or AMM protocols, incentivizing deposits/LP-ing through emissions

Curve, Convex

- ▶ CRV token launched Aug 13, 2020. CRV is an AMM protocol, optimized for swapping stablecoins
- ▶ LPs on CRV get CRV token emissions
- ▶ CRV token holders can vote on CRV governance, most importantly...
- ▶ Which AMM pools get the most CRV emissions!
- ▶ CRV must be “vote locked” into veCRV to have voting power, however, Convex finance figured out a workaround:
 - ▶ Hold a bunch of veCRV in a pot, trade claims to the veCRV pot
 - ▶ Now holds large % of all CRV

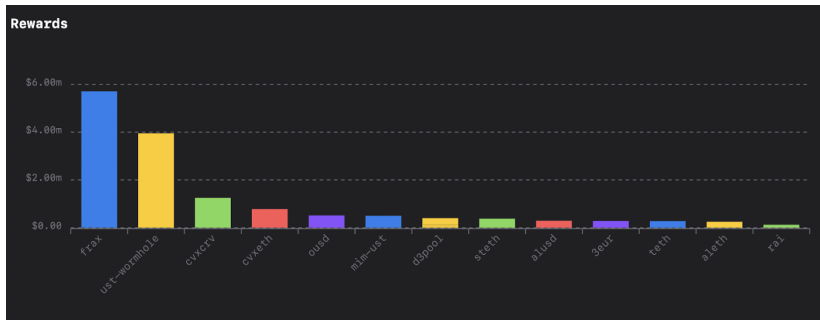
Some info

The Bribe Market and the Curve Wars

- ▶ Many Curve LPs don't actually care about voting
- ▶ However, many stablecoin protocols really care about emissions!
- ▶ “Delegation” is contractible: hence votes can be sold!
- ▶ Votium is the “market for bribes”: a platform for selling CRV/CVX voting power for money

Source

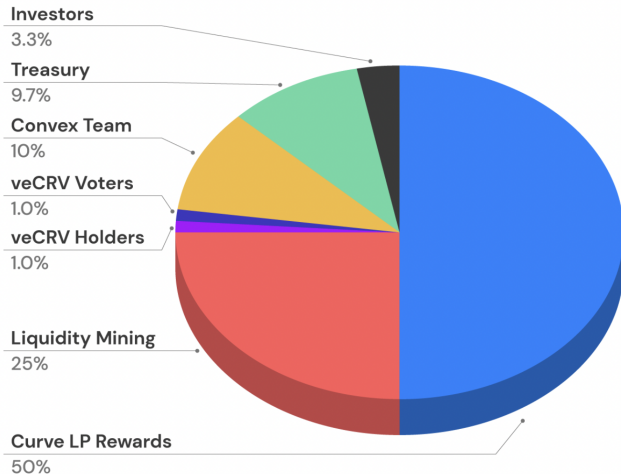
Who are the Buyers?



- ▶ Stablecoins are valuable if people think their price is close to 1
- ▶ The more CRV rewards are for stablecoin pools, the more people LP
- ▶ The more people LP, the more stable + close to 1 prices are
- ▶ Hence, market for stablecoin issuers to “bribe” CRV owners to direct emissions to stablecoin pools

Source and Source

Token Distribution



Tokenomics

- ▶ How many tokens will there be?
 - ▶ Fixed or flexibly supply?
- ▶ Will more be printed (BTC, ETH)? Or bought-and-burned (ETH, MKR)?
 - ▶ My theory about buy-and-burn...
- ▶ Who gets the tokens? How to get the tokens?
 - ▶ Insiders? (Investors, workers, advisors...)
 - ▶ Community? (LPers, lenders, users, game players, community/governance contributors. . .)
- ▶ When can people sell the tokens?
 - ▶ Lockup periods common for team, to prevent “rugging” (dump all tokens and leave project)
 - ▶ “Community” portion generally distributed slowly over time
- ▶ What do tokens do?
 - ▶ Cash flow rights?
 - ▶ Governance rights?
 - ▶ “Community membership” rights?

Rented Liquidity is Fragile!



Magik Labs ✨
@magikinvestxyz



~50% of the yield farmers exit within 15 days of entering a yield farm

Retrospective analysis of Yield farms reveals an interesting fact about their user retention metrics

@Nansen_ai team published an interesting report on this 📉

1:09 PM · Jul 11, 2022 · Typefully

Source

Olympus

Olympus (OHM) launched in approx. April 2021. Innovations:

- ▶ “Backed” not “pegged” to 1USD
- ▶ “Protocol-owned liquidity”: OHM uses its treasury... to LP OHM-ETH and OHM-stablecoin pairs, supporting OHM's price!
- ▶ “Bonding:” vesting equity sales mechanism to support prices

Olympus

- ▶ If people think OHM will do well, it could trade above backing. How much?
 - ▶ \$2?

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 - ▶ At peak, OHM price was \$1,200!!!

Olympus

- ▶ If people think OHM will do well, it could trade above backing. How much?
 - ▶ \$2?
 - ▶ \$10?
 - ▶ \$100?
 - ▶ At peak, OHM price was \$1,200!!!
- ▶ **Nobody had any clue how to price this thing!**

Olympus: Staking Yields

- ▶ Olympus paid interest on staked OHM, of over 7,000% APR!!!! How?
- ▶ If you need to keep \$1 per OHM, and OHM is trading at \$1,000:
 - ▶ Print an OHM, sell to market for \$1,000
 - ▶ Keep \$1
 - ▶ Distribute \$999 to users (or yourself!) as interest

Olympus: Price Patterns



My entry



Etherscan link

My Exit

How I became exit liquidity



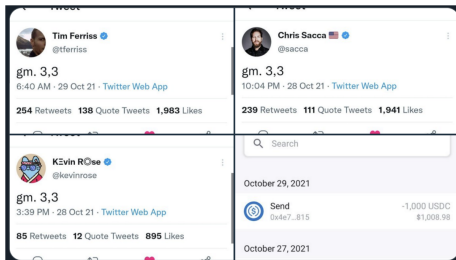
Arbiscan link

The Memes

(3,3) Investors:

You cannot escape seeing the (3,3)-meme on Twitter. Recently many prominent investor like Kevin Rose (1.5M followers), Chris Sacca (1.6M), and Tim Ferriss (1.7M) used the “(3,3)”-meme in their tweets. Many of their followers must have seen this and asked what it means.

In addition, Mark Cuban’s wallet showed that he bought \$486,000 of OHM (439 OHM) on October 28th, adding to his over 1,200 OHM.



Famous people tweet the 3,3-meme.

The Memes 2



James (is looking for a prod role)

@draecomino · Follow



OHM is not your average supermarket ponzu—it's ponzu made from the finest high APY yuzu from Mt. Olympus.



DCF GOD @dcfgod

The purest form of a treasury is "if your token crashed, how much money would you have to continue to build the business"

Ohm has the biggest treasury in all of defi, and it's not even close

What happens when this \$200M doesn't just sit there? A sea of money to deliver value

DAO	Uniswap	Lido	Compound	Aave	Gitcoin	Synthetic	Tornai
-	\$ 6,381,434,596	\$ -	\$ 888,872,143	\$ -	\$ 366,852,029	\$ -	\$ 331
,097	\$ 4,338,138,620	\$ 885,316,309	\$ 39,665,925	\$ 755,596,284	\$ 45,262,949	\$ 346,584,175	\$ 16
,133	\$ -	\$ 77,737,576	\$ -	\$ 3,349,551	\$ 108,239,781	\$ 58,589,366	\$
,130	\$ 10,719,573,216	\$ 963,053,885	\$ 928,538,068	\$ 758,945,835	\$ 520,354,759	\$ 405,183,541	\$ 346
43%	0.00%	8.07%	0.00%	0.44%	20.80%	14.46%	

9:08 PM · Oct 7, 2021



33



Reply



Share

Explore what's happening on Twitter

VC Deals...?

- ▶ For many projects, “insiders” get a better deal
- ▶ See Keone Hon’s post [here](#)
- ▶ pOHM: call options to buy OHM at \$1!
- ▶ When OHM is \$1400, basically free OHM!
- ▶ 450mil pOHM outstanding as of Dec 19 2021: much higher than OHM market cap!
- ▶ pOHM vesting depends on OHM market cap, can never be more than 11.8% of total supply
- ▶ Prevents insiders from exercising, dumping, and driving prices down

Olympus: Lessons Learned

When faced with a new project:

- ▶ Where is the money coming from?
- ▶ How can they pay such a high yield?

Modigliani-Miller and Frictionless Markets...?

Being at UChicago, we must ask:

1. How are token drops (equity issuance) different from just handing out cash?
2. Why does the initial distribution of tokens matter? Shouldn't markets quickly redistribute to the efficient outcomes?

Modigliani-Miller and Frictionless Markets...?

Hard questions! My answers:

1. How are token drops (equity issuance) different from just handing out cash?
 - ▶ Tokens are somewhat overvalued due to market sentiment. Hence, equity issuance is cheaper to firm than cash raising*
 - ▶ Users win, if they quickly sell tokens. Ultimate losers are the hodlers*
 - ▶ See my Substack on [Yield Farming as Growth Hacking](#)

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2. Why does the initial distribution of tokens matter?
 - ▶ Coase Theorem fails: initial allocations are “sticky”. Inattention? Endowment effects? Community sentiment?
 - ▶ More speculative: path dependence of project value? Since tokens have governance rights, allocation of voting power \implies path of project \implies who wants to own project... and so on

*Not investing advice!

Why are Governance Tokens Worth Anything?

- ▶ Generally have voting/decision rights
- ▶ Some have something like cash flow rights; however, somewhat hard in US
- ▶ However, are future cash flow rights worth much, if so much is being printed to incentivize users?
- ▶ Again, my [post](#) compares yield farming to VC-subsidized growth hacking in Silicon Valley
- ▶ TL;dr: farmers who dump probably win, token hodlers probably lose

Tokenomics Project Ideas

- ▶ Come up with a novel tokenomics system!
- ▶ Legal understanding of existing tokenomics strategies
 - ▶ My sense: bit of a disconnect between practice, and legal scholars' understanding, lots of room for improvement
- ▶ Is there a way to determine optimal tokenomics?
 - ▶ Many articles, but IMO mostly BS
- ▶ Tokenomics data analytics/consulting: how to tell if I am exit liquidity?

Credits

- ▶ Much of my research came from two twitter threads:
- ▶ [This one](#)
- ▶ and [This one](#)