iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 10 **Issue:** VI **Month of publication:** June 2022

DOI: https://doi.org/10.22214/ijraset.2022.44409

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue VI June 2022- Available at www.ijraset.com

The Rise and Fall of High APY Decentralized Autonomous Organizations in the Blockchain Ecosystem

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Abstract: ***The Blockchain ecosystem provides a space for developers and investors alike. Every few years we notice a certain type of project that catches the eyes of investors that disrupts the whole ecosystem, seeming to provide the most value/ returns in the eyes of the investors. Oftentimes, as history has proven these projects are nothing but a mirage formed by complex mechanisms that prove no utility/ work in a way that seems valuable at first but is an implementation of something very simple once understood. Decentralized Autonomous Organizations are a recent ecosphere of projects that took over the industry- built over possibly every layer 1 and layer 2 blockchain. This is a study on why the working of the DAOs was fundamentally flawed and the catalysts that caused projects on such a large scale to fail.***
Keywords: ***Algorithmic Stablecoins, Rebases, Minting, Staking, Reserve Currency, Rebases, Defi 2.0***

I. INTRODUCTION

The Blockchain is an extensive ecosystem sustaining the hunger of investors and developers alike. It proves home to numerous projects every year, with the Web3 ecosystem currently known to be one of the most competitive environments to build a startup in. The community is brutal in analysis of projects. Hence, on a short timeline, it is particularly simple to differentiate a good project from a substandard one.

From Filecoin, Litecoin and other projects that essentially forked the bitcoin code in the 2017 crypto bubble, to alternative layer 1 blockchain platforms like Avalanche and Cardano with other layer 2 projects like TraderJoe built over them, history has shown us projects that may have perspective utility often times are not that well built as a consequence of the sentimental influence of cryptocurrency investors.

Sometimes a certain type of project catches the eye of investors and developers alike. These Projects end up creating a bubble sort of ecosystem on their own. For example, on a larger scale layer 1 ethereum alternatives could be classified as one such bubble. These Layer 1 projects are responsible for the price hike in cryptocurrencies the past year which saw bitcoin briefly touching $68,000 in the month of november 2021 and built on these are numerous layer 2 projects ranging from decentralized exchanges to NFT collections to Defi 2.0 projects.

Post the 2017 bitcoin all time highs, this space became a race. A race to see who could develop a project that gave maximum returns to its investors. Although good utility and tokenomics are major contributors to making a project successful, this space started witnessing the introduction of utility less tokens like Doge and ShibaINU which solely owed their value to the hype associated with them. And then came the DAOs. These Decentralized autonomous organizations commonly offered APYs in the 5 digits, appearing to be a breakthrough in the traditional defi, hence labeled defi 2.0.

II. INTRODUCTION OF THE DAOS

Around February 2021 a new project, “Olympus DAO” claiming to be a reserve currency economically mirroring the model of the US dollar was developed. The Olympus DAO project presented itself as a Decentralized Autonomous Organization, a open source project unaffiliated with any major organization where the members get to govern the important decisions taken by the DAO, perfectly in sync with the Decentralization principles of the blockchain. Along with this it also mirrored the tokenomics and overall economic model of the US dollar presenting itself as a censorship resistant decentralized reserve currency for emerging web3 applications across all present and future chains.

Olympus set out to give a community driven, decentralized edge to finance. Olympus had protocol owned liquidity, solving one of the biggest challenges in traditional defi, sustainable liquidity for a project’s native tokens.

They adopted a dopamine-inducing 3x a day rebase modal, which let users visibility see their stake in the project increase. Add to this the never seen before 4 digit APY, and they had investors head on heels to grab a stake in the DAO.

Developers soon realized the DAO modal could easily be brought onto other layer 1 blockchain solutions. Afterall, Olympus was built on the Ethereum blockchain which is known for its abnormally high gas fees. The gas fees on the Ethereum network stopped many defi enthusiasts from buying into the project. Developers seized this opportunity, and forked the Olympus code to Avalanche, creating one of the most infamous projects in defi history, Wonderland TIME.

III. UTILITY OF HIGH APY TOKENS

The main utility associated with these Decentralized autonomous organizations was the fact that they were made to be used as a new world reserve currency. A currency that is not affiliated with any government, but at the same time is backed by a basket of assets that make sure that its price does not fall below a particular intrinsic value. They were made to be censorship resistant, decentralized assets that let users transact/ store value in them due to their independent nature to traditional finance for survival.

Tokens of various DAOs aimed to become a neutral currency for Web3 applications, streamlining transactions between various users, while also adopting a democratic DAO model which let its community govern its roadmap.

The 4 main reasons they claimed fame were all a consequence of being a decentralized reserve currency.

They promised a stable token that would preserve purchasing power, aiming to be a hedge against inflation. Since these protocols owned their own liquidity, they could easily be transacted for other assets at any given time.

They aimed to be the standard denomination for all currencies in the web3 world providing a stable and trusted backing to all other assets, just like the US dollar in current times. Olympus is still on the roadmap to establish OHM's status as a decentralized reserve token. Forks of Olympus on other blockchains followed the same general strategy, slightly modifying their goals to fit into a more niche group of investors.

Wonderland TIME implemented a cross chain version of the same model, introducing itself as a cross chain policy controlled reserve currency. Add to this the fact that Wonderland had a doxxed developer who had delivered time and time again in the past, these DAOs were ready to go to the moon.

IV. WORKING OF THE DAOS

First we need to understand the difference between a backed token and a pegged token. Each of these DAOs had their own native token which was backed by a basket of assets present in its treasury. These assets back the value of the token to at least 1 pegged token- pegged usually to the value of 1 US dollar. Whenever the value of 1 backed token fell below the value of one pegged token, the treasury would execute an automatic buyback and burn native tokens till it pushed the price back up to the value of the pegged token. In theory, this meant that there existed a lower limit to the value of each pegged token, thus driving home the aim of creating a non volatile and safe decentralized reserve currency.

This also meant that there was no upper limit to the value of these backed tokens, often trading much much higher than their floor value- a line of intrinsic value that this native backed token could not fall below.

In the case of Olympus and Wonderland, the native backed tokens were $OHM and $TIME respectively, and their pegged tokens were $DAI and $MIM respectively.

A. Protocol Owned Liquidity

[4]Since the main aim for OHM was to set a new standard for decentralized reserve currency, high liquidity for and minimum slippage for trades were prerequisites. The DAOs addressed this issue by owning its own liquidity.

The bond mechanism ensured this. The same treasury assets that contribute towards the risk free value of their native tokens would act as the (protocol owned) liquidity for these DAOs.

This let the native tokens become an everyday tradable, liquid pair which opened the possibility of other assets being denominated in them.

Unlike traditional finance, which would in theory crash if all depositors suddenly withdrew their funds all at once (due to their user funded liquidity model), these DAOs guaranteed enough liquidity to handle any sort of buy or sell transaction all at once thus also preventing liquidity migration.

Since most assets in the treasury were liquid, the DAO themselves could take advantage of this and extract rewards from its LP tokens which led to increase in the tokens floor value. Additionally, since they themselves contributed greatest to liquidity, they got the biggest part of the liquidity provider fees, which further added to the treasury.

Fig. 1 Graphs depicting Olympus DAO protocol owned liquidity, RFV, Market Value and Total Deposited Value

B. Game Theory

1) Staking: [2]Participating in the activities of a DAO requires a user to perform 1 or 2 actions. Either Stake or Bond. Staking is as straightforward as staking in every other defi protocol in crypto history. Users who either bought their tokens from a defi exchange or exchanged their bonded liquidity for the native token could stake their token on the protocols dashboard to gain advantage of the DAOs APY which was a direct result of the minting that the protocol carries out. A foreseeable price or supply expansion would most likely lead to a player wanting to stake their tokens, thus keeping supply off market. Suppliers would gain by compounding their rewards on a 3 times a day basis.

2) Bonding: [2]Although staking is the primary strategy of DAO for its users to procure value, another way users would acquire returns was through the process of bonding- the process that is responsible for all rewards and locked up liquidity. Also known as (1,1), bonding is the process that grows treasury assets. Users who owned liquidity provider tokens could sell them to the protocol in exchange for the protocols native token at a discounted rate after a vesting period. Players are likely to participate in bonding if drastic price volatility is not anticipated. A fixed deposit of LP tokens is put upfront for discounted native protocol tokens which can then be staked. A bonders profit is directly dependent on the value of the native token at the maturity of the bond.

3) (3,3): [1]A gamified perspective was employed in the workings of these DAOs. The whitepaper extensively explains the (3,3) method being the most beneficial way to earn from the protocol. In the DAO system a user can either stake, bond or sell their tokens. Staking is correlated to +3, Bonding to +1 and selling to -1. The following table explains the most beneficial strategy to amalgamate the three actions for maximum profit.

	Stake	Bond	Sell
Stake	(3, 3)	(1, 3)	(-1, 1)
Bond	(3, 1)	(1, 1)	(-1, 1)
Sell	(1, -1)	(1, -1)	(-3, -3)

Fig. 2 Table showing favourable combinations of Staking, Bonding and Selling

(3,3) is the most favorable method of utilizing the protocol while (-1,-1) the most detrimental. Combinations of selling and bonding or staking and bonding as also beneficial, but relatively so compared to (3,3). This strategy worked out great for the DAOs, with Olympus DAO still having about 99.3% of all OHM tokens staked.

4) .Leverage Looping: (9,9): The only aspect that was now left to give this a fool proof personality of a value printing model was leverage. And wonderland brought in just that. The creator of wonderland, Daniele Sesta had a bigger picture in mind. He created Abracadabra money, a defi protocol that let users borrow $MIM, a USD stable coin against their wMEMO (staked and wrapped $TIME). This borrowed $MIM could then be exchanged for $TIME and could be staked again.
This process would then be repeated until a desirable liquidation price. This was famously referred to as the (9,9).

Soon all these factors led to an explosion in the DAO industry. Defi 2.0 protocols claiming highest APY took over the image of what was supposed to be a decentralized autonomous organization governing the world's first decentralized reserve currency. In its first year, Olympus onboarded more than 85,000 users, over 60 developers, over 50 partnerships and about 150 different developers working on the protocol. Good project, good developers and a good community- they had the textbook recipe for a project that was ready to break through the blockchain scene

V. FACTORS THAT LED TO THE DOWNFALL OF THE DAOS

A. Risk Free Value (RFV)

Although these DAOs had a established Risk free value (also known as floor value), where each native token was backed by a certain part of the treasury incase something went wrong, Ultimately, this 'floor value' in the end was just an arbitrary number, a number that displayed the total treasury value of the treasury / number of tokens in circulation. The existence of a 'Floor Price' on the dashboard did not mean the value of a DAOs native token could not fall below that price. It just meant that the treasury held enough assets to compensate users with that particular value incase of a redemption.

B. Inflammatory Tokenomics

DAOs across different chains saw a rising amount of offered APY. This looked attractive on paper and bought in investors, but people forgot to take into account the problem of dilution. Minting tokens out of thin air at such high rates would end up with the value of tokens continuously dropping due to the increased supply. Proponents would argue that fiat money is a shared delusion enabling value exchange, they way they operate analogous to how central banks do. This is true to a certain extent but this system fails in the case of (-1,-1). In a closed system, wealth is not created nor destroyed.

Name	Token	Average APY*	All Time High Price	Current Price (03/02/22)	Down % since ATH
Olympus	*OHM*	8000 %	$ 1,415	$ 62.97	**-95.55 %**
Wonderland	*TIME*	80,000 %	$ 10,063	$ 281	**-97.20 %**
Hector DAO	*HEC*	400,000 %	$ 357	$ 22.49	**-93.71 %**
Klima DAO	*KLIMA*	35,000 %	$ 3,777	$ 47.33	**-98.75 %**
Euphoria	*WAGMI*	600,000 %	$ 1,892	$ 27.81	**-98.56 %**
OtterClam	*CLAM*	150,000 %	$ 69.12	$ 4.65	**-93.27 %**
MetaversePro	*META*	80,000 %	$ 410.29	$ 17.01	**-95.85 %**
R U Generous	*RUG*	1B %+	$ 2,041.20	$ 4.19	**-99.79 %**
Rome	*ROME*	150,000 %	$ 1,679.53	$ 74.88	**-95.54 %**
Spartacus	*SPA*	320,000 %	$ 323	$ 15.96	**-95.06 %**
Jade Protocol	*JADE*	3,000,000 %	$ 876.29	$ 21.68	**-97.53 %**
Nidhi Dao	*GURU*	1B %+	$ 393.06	$ 2.02	**-99.49 %**
Fortress	*FORT*	1,200,000 %	$ 215.98	$ 6.19	**-97.13 %**
OneDao Finance	*ODAO*	1B %+	$ 11,108	$ 35.30	**-99.68 %**
Snowbank	*SB*	1,000,000 %	$ 6,154.36	$ 194.89	**-96.83 %**
Exodia	*EXOD*	200,00 %	$ 13,669.50	$ 120.18	**-99.12 %**
Nemesis DAO	*NMS*	20M %	$ 6,366.14	$ 55.66	**-99.13 %**
Titano	*TITANO*	100,000 %	$ 0.208	$ 0.097	**-53.44 %**

Fig. 3 [3]Table of current value of various DAO native tokens as compared to their all time highs

C. Byzantine Mechanics

The way the DAOs operated was portrayed to be very unorthodox and complex. DAOs presented themselves with extensive whitepapers explaining the system of the (3,3). Using a complex way to mask the fact that they were rewarding early investors at the expense of latecomers- A primitive ponzi.

D. Forking and Rugpulls

The DAOpocolypse started with Wonderland forking the Olympus model onto Avalanche and led to developers forking the code to various other chains trying be the best in their own chain.

The simplicity of forking this system made it easy for malicious parties to easily lure in investors and execute a rugpull. Snowball DAO set up on the avalanche chain was a famous example of one such rugpulled DAO.

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue VI June 2022- Available at www.ijraset.com

E. Leverage and Liquidation Chains

Degen users would carry out multiple cycles of borrowing against their wrapped staked assets to perform (9,9) without properly understanding the risks of liquidation in leverage. When the value of a leveraged token falls down, it triggers liquidations which further pushes the value even lower. This creates a liquidation chain that creates a keeps pushing its value down further and further.

F. 0xSifu

[7]0xSifu was the treasurer of Wonderland. Users of this protocol trusted him due to back to back delivery carried out by the wonderland founder Daniele Sesta. But soon, onchain sleuths on the avalanche network managed to dox the true identity of 0xSifu. He was alleged to be the cofounder of the infamous QuadrigaCX, a canadian exchange that collapsed with $169 million of its users funds. Daniele Sesta then publicly admitted having knowledge of the true identity of 0xSifu. This created widespread panic and rage in the DAO ecosystem and triggered the beginning of the end.

VI. AFTERMATH

Users realized that their funds were not safe in these protocols. The dox of Micheal Patryn led to the mammoth crash in the value of not just native wonderland tokens, but also tokens in the entirety of the defi 2.0 ecosystem. DAOs saw a price drop of upto 99%, with many having to offer redemption options or remodel their whole structure of operation in order to manage investor rage. Investors started to understand the true model of the DAOs. Dilution was starting to become obvious when there was no more demand for native tokens. Value would keep going down and holders would act as nothing more than exit liquidity for early sellers. Initial sellers would drive the price of tokens further downwards, eventually leading to no value for the tokens of the 'diamond handers'. These protocols rewarded the early extrants at the cost of the latecomers.

Initially the extensive public demand kept the image of the DAO model in positive light. Whoever sold first into the liquidity pool would make the most whilst draining real assets from it in exchange for made up valueless ponzo tokens. Users were led to believe that the real wealth transfer was taking place from protocol to themselves when in fact the protocol lost nothing.

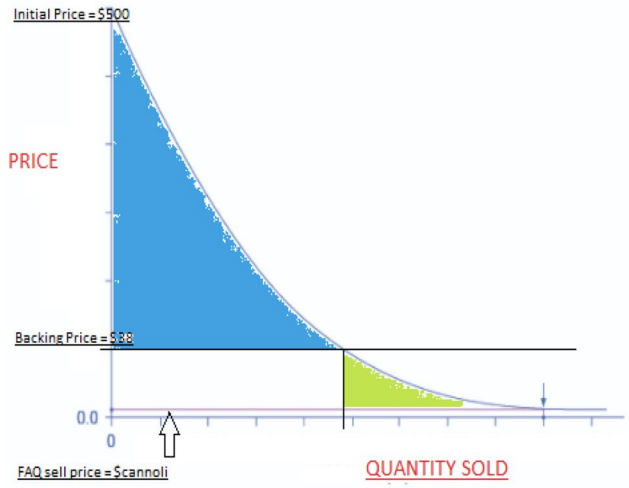

Fig. 1 Graph depicting selling prices compared to backing price over time

VII. CONCLUSION

[5]When humans are placed in the land of plenty, their primal urge is to grab first and think later.

This is exactly what happened in the case of the DAOs. Although the fall of native tokens still draws bargain hunters, the fact that early investors sold into the treasury long ago means that the treasury just holds a huge amount of useless tokens which keeps lowering and lowering the value of those tokens itself- exactly how a ponzi scheme works.

Dopamine inducing rebases, showing investors live returns thrice a day, a perfect get rich quick type model offering insane numbers on the APY with leverage to multiply these gains even more (only until investors realized the actual model), the DAOs had a good run in this ecosystem.

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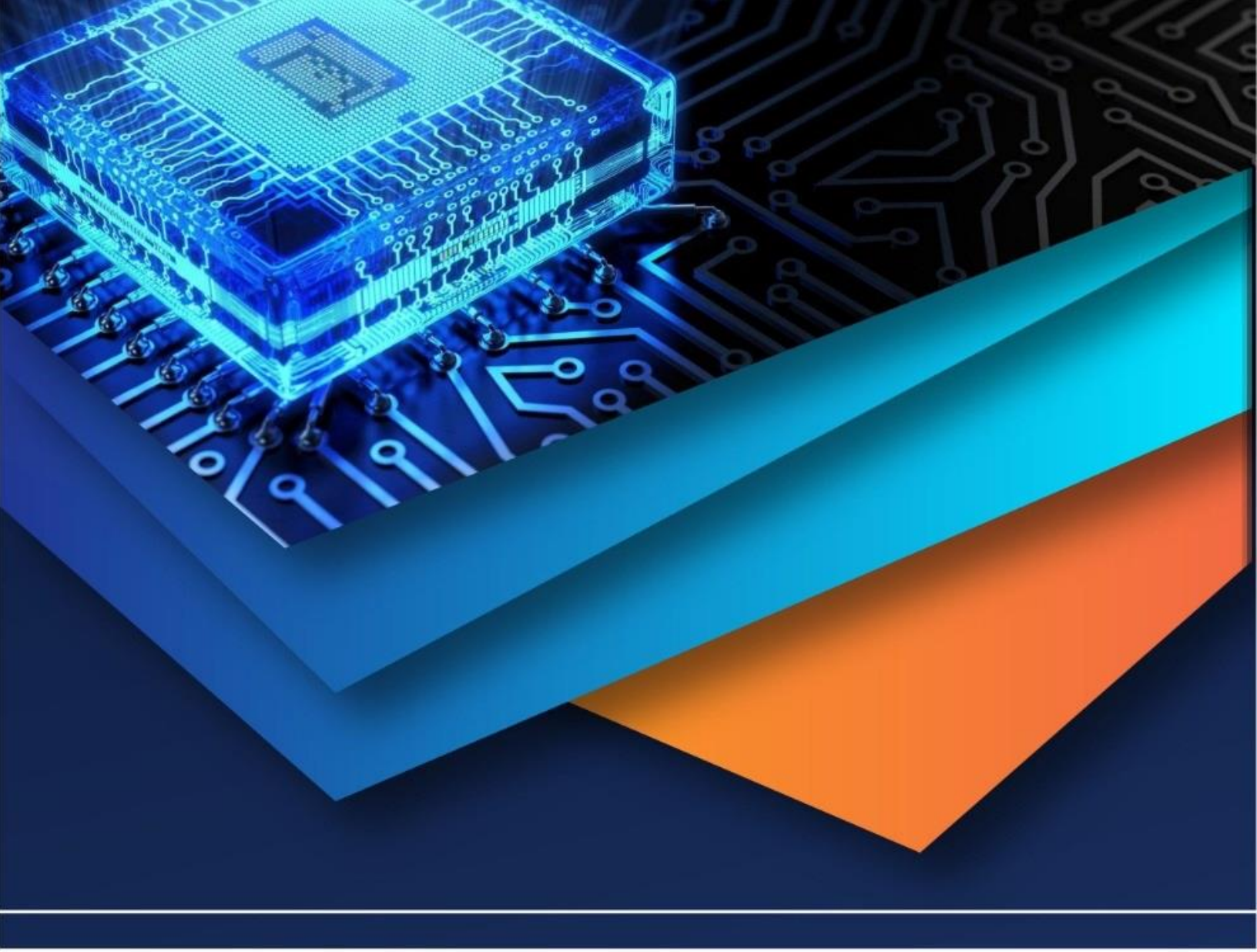

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