

COULD OP MAKE OPTIMISM THE NEXT ROLLUP KING?

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The blockchain community's expectations have not gone unmet, as Optimism, one of the four major Layer 2 teams, will be issuing a token.

On April 27, Optimism announced that it will issue the native token OP and unveiled its economic model. Optimism also made clear that airdrops were going to be released to OP early adopters, active users and active contributors to Ethereum, pushing the community's enthusiasm to a new high again.

1 Recent Performance of Optimism

On April 19, Optimism released an article, "A New Chapter", which reviews the project's history, current status, and latest developments. The final section of the article was brief, stating that "We're nearing the end of a chapter and the beginning of the next – one driven by community ownership and governance." The market took this as a hint of an upcoming coin offering, and a wave of "interaction" ensued. Let's take a look at Optimism's recent statistics.

The first indicator to watch is the change in Optimism's TVL. According to Huobi Global, the price (opening price) of ETH fell from 3110 USDT to 2860 USDT in the last 7 days, a drop of 8%. The overall TVL of Layer 2 fell slightly from 6.47 B USD to 6.33 B USD. Optimism's TVL, in contrast, bucked the market by 15%, rising from 590 M to 686 M – making it almost the only mainstream Layer 2 project to rise. If denominated in ETH, it has risen 18% and is clearly trending upwards at an accelerating rate. It is evident that the upcoming coin issue is very attractive to funds.

Figure 1: TVL changes of the top 10 Layer 2 projects in the last 7 days

No.	Name	TVL	Breakdown	7d Change	Market share	Purpose	Technology
1.	Arbitrum	\$3.57B		-1.17%	56.41%	Universal	Optimistic Rollup
2.	dYdX	\$999M		+0.55%	15.78%	Exchange	ZK Rollup
3.	Optimism ^{OP}	\$662M		+15.00%	10.46%	Universal	Optimistic Rollup
4.	Loopring	\$319M		-0.87%	5.05%	Tokens, NFTs, AMM	ZK Rollup
5.	Metis Andromeda ^{OP}	\$288M		-11.05%	4.55%	Universal	Optimistic Rollup
6.	Boba Network ^{OP}	\$157M		-6.21%	2.48%	Universal	Optimistic Rollup
7.	zkSync	\$105M		-10.43%	1.67%	Tokens, NFTs	ZK Rollup
8.	ZKSpace	\$71.85M		-1.14%	1.13%	Tokens, NFTs, AMM	ZK Rollup
9.	Immutable X	\$58.79M		-3.32%	0.93%	NFT, Exchange	Validium
10.	DeversiFi	\$49.27M		-4.28%	0.78%	Exchange	Validium

Source: L2Beat

Figure 2: TVL of Optimism denominated in ETH



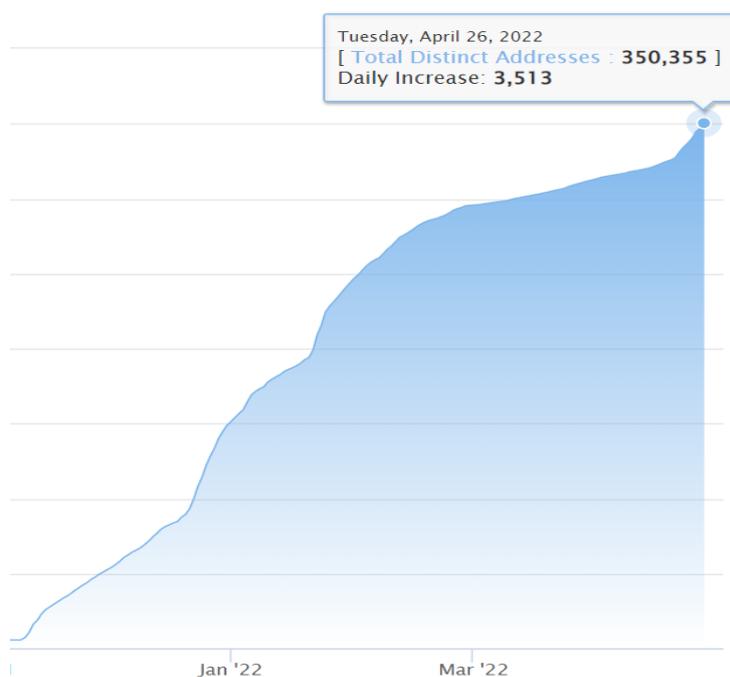
Source: L2Beat

According to Optimistic.Etherscan, Optimism has also seen a spike in the total number of addresses which rose from 327,000 to 350,000 in one week, an increase of 7%. We found that the funding grew faster than the number of addresses, probably because the article conveyed the idea that OP will be more open and community-oriented. This triggered an ecological building frenzy, which in turn gave users more confidence and thus put more money into the network. These users are people who intend to use Optimism for a long time, and who are mainly long-

time users. As airdrops attract many new users who may not be cashed-up, it is essential to attract those who want to stay in the Optimism ecosystem for a long time in order to bring more money. As such, it is more likely that long-time users will continue to migrate their assets to Optimism.

The number of transactions in the last week stood at about 70,000 per day, up 56% from the average of 45,000 per day from March 19 to April 19. The network has picked up in terms of activity due to the prospect of receiving airdrops.

Figure 3: Rapid growth in the number of Optimism addresses



Source: Optimistic.Etherscan

With the spike in transactions, are the new users all going to interact specifically just to receive airdrops? Comparing the number of daily trading addresses and daily new users in the past month, we see that the percentage of new users has increased significantly after speculation of airdrops. This shows that the recent positive data does deviate a bit from the regular situation. That said, it is normal for people to be attracted to airdrops. After all, OP is backed by a16z and Paradigm, with funding absolutely guaranteed. When the rules of the airdrop are set, the ability

to retain users and funds become a major issue for OP. If users can be retained through follow-up activities and the healthy development of ecological projects, it is possible to write a new chapter of leapfrog development.

Table 1: Number of Optimism transaction addresses in the past month

Date	3/29	4/5	4/12	4/19	4/26
Transacting Address per Day	3200	2200	2400	4500	9000
Daily First-Time Users	540	409	449	1220	2490
Percentage of new users	16.9%	18.6%	18.7%	27.1%	27.7%

Source: Dune Analysis

Can the Optimism network accommodate the massive growth in users and transactions? Would the rapid growth result in higher fees for individual users, or would the fees be amortized across more users?

The answer to the first question is yes. As Optimism has a TPS of just 1.3, far below the theoretical TPS limit of 500 for OP Rollup, OP has the capacity to carry more transactions, easily accommodating a 50-fold increase – not to mention a 50% increase.

The answer to the second question is no. The cost of Optimism consists of two components, with the following formula:

$$\text{Layer 1 Gas cost} = \text{Fee Scalar} * \text{L1 Gas Price} * (\text{Calldata} + \text{Fixed Overhead})$$

$$\text{Layer 2 Gas cost} = \text{L2 Gas Price} * \text{L2 Gas Used}$$

For a single user, the L2 cost depends on the L2 Gas price. As the latter has been stable, this part of the cost has not increased with the growth of throughput. The L1 cost has relatively more influence, but in the last month there has been no change to the Fee Scalar (determined by Optimism itself). There is also no change to the unit price for Calldata, whose volume is

proportionate to the number of transactions. The Ethereum Gas Price has not changed much, while Fixed Overhead has not budged. Looking at the relationship between the number of daily transactions and L1 Gas consumption of Optimism in the past month, we find that the L1 Gas consumption per transaction is basically unchanged. This indicates that the current throughput of Optimism is not so high as to trigger congestion in Ethereum, which would result in an increase in Gas Price. It also cannot further amortize the fixed overhead cost of individual users. To further reduce future usage costs, we still need to start by reducing the amount of data uploaded, i.e., from Calldata compression. Optimism has made good progress in tapping this potential on this front, and ideally it can complete this technology update soon. More details can be found in the article, [The Road to Sub-dollar Transactions, Part 2: Compression Edition](#).

Table 2: Number of daily transactions and daily L1 Gas consumption

Date	4/5	4/12	4/19	4/26
Transactions per Day (7D MA)	49,000	51,500	43,600	70,000
L1 Gas Usde per Day (M, 7D MA)	207	222	191	307
L1 Gas Used per Transaction	421.7	431.9	439.0	438.6

Source: Dune Analysis

2 Three highlights from the governance announcement

The following section focuses on governance and the token economics announcement, with an explanation of some highlights.

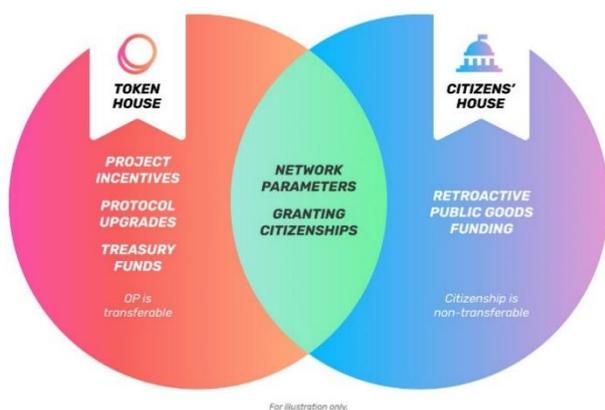
Highlight 1: Setting up Citizens House to safeguard long-term interests

Optimism's governance organization consists of two parts, Token House and Citizens House.

The Token House is applicable to token holders, which does not differ much from other projects. Citizens House is a feature consistent with the DAO of the previous Retroactive Public Goods Funding (Retro PGF), which planned and made decisions for the long-term development of the project by selecting a group of dedicated builders proficient in the technology.

Citizens House's primary role is to allocate PGF funds to support projects that can contribute to the OP ecology. These projects either do not yet have a profitability or profit model in the short term or are non-profit in nature. It is consistent with the spirit of long-termism that Optimism has always maintained, and can be structured to ensure the proper functioning of the virtuous circle to be described later. Since the early Citizens may have a technical background, it is more likely there will be some developer tools-type projects funded. This is conducive to attracting more projects to the OP ecology and promoting the long-term development of the ecosystem.

Figure 4: Token House and Citizens House of Optimism



Source: Optimism

Highlight 2: Opening Sequencer and devoting revenue to public goods

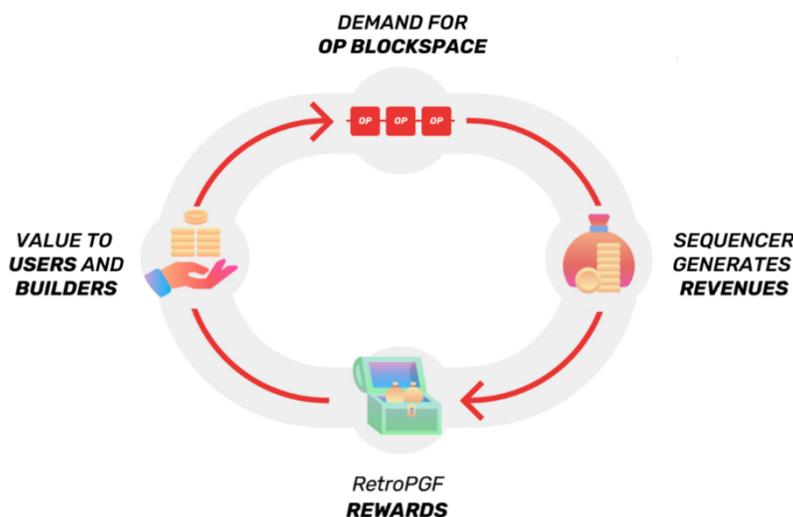
Optimism is a Layer 2 network, which is similar to the Layer 1 blockchain network in that it relies on the sale of block space for profit. While the public chain's block generators are miners,

Optimism's block generators (for ease of expression, let's use the word block first) are Sequencer, which was previously served by the team itself and whose revenue is distributed by the Optimism Foundation.

The announcement suggests that the future official will sell the right of participating in the decentralized Sequencer network, which is actually an auction of the right to operate the network. On one hand this will increase the decentralization of the network and reduce the probability of a single point of failure. On the other, this is a way to share the revenue rights of the network with the community. The protocol is funded through the sale of the aforementioned participation right, and the Sequencer benefits from the sale of block space. Revenue from Sequencer auctions is primarily used to fund public goods, create ecosystem value and boost demand for block space. It is the decentralized Sequencer that has the largest ownership of the community and could have a significant impact on the industry landscape if it is the first to do so.

Builders receiving PGF funding can be compensated without generating any income, and the early investors who financed them can enjoy an earlier return. Early investments in non-profits, free and open-source software (FOSS) and public service projects then get to exit. With more security for both builders and investors, more innovation is likely to be generated, promoting more non-profits to thrive and maximizing community benefits. In this way, this creates a virtuous circle.

Figure 5: The virtuous circle of Optimism ecosystem



Source: Optimism

Highlight 3: Continuously attract users with multiple rounds of airdrops

This round marks the first airdrop for OP, where 5% of the total circulation will be distributed to 264,000 addresses. According to the announcement, 19% of the tokens will be airdropped, which means 14% more tokens are waiting for users to collect in future. This gives users the opportunity to continue to receive rewards, and those who did not receive the airdrop the first time can still prepare for the next windfall by continuing to use and participate in governance. There are no official rules for subsequent airdrops, and users need to be more actively engaged in the development of the ecosystem to increase their probability of winning a prize. This will help to continually attract users and increase their retention rate.

3 The impact of token issuance on the industry

Rollup is the current main technology route for Layer 2. OP Rollup has gained a lead because of its easy compatibility with EVM, with over 70% of the money in Layer 2.

Over the course of almost a year, OP Rollup has formed four major platforms, namely Arbitrum, Optimism, Boba, and Metis. Prior to this, both Boba and Metis played the role of the "second OP Rollup platform", with their underlying technology coming from Optimism. Both Boba and Metis issued tokens early on and their TVLs expanded rapidly with the token rewards, but both suffered significant retractions in TVLs later. The reason for this is that quality projects have not been cultivated or attracted to the ecosystem. Many established quality projects such as Uniswap, Aave, Curve, etc. were simply not deployed on them. Some native projects rely on liquidity mining to expand rapidly, but lack of continuous innovation or long-term planning led to the outflow of capital and users. With no token issuance, Optimism has become the number two OP Rollup platform after Arbitrum by virtue of its technological strength and project quality over the year.

Being ranked in second place is the lower limit of Optimism. The only one standing in its way is Arbitrum.

Arbitrum took off in September last year and has remained at the top, with its current TVL at \$3.57 B which is more than half of Layer 2's overall TVL. Optimism launched earlier than Arbitrum, but was overtaken later. Several factors contributed to this. This included the fact that OVM was not fully compatible with EVM at the beginning of the launch, which led to a large migration effort. Only projects in the official whitelist could be deployed, which effectively blocked some projects. Lastly, the official support given to projects by Optimism fell short of the level for Arbitrum.

With the successful implementation of OVM 2.0 (October 2021), the repeal of the whitelist scheme (December 2021), plus issuance of tokens, various funds and PGF, the causes for Optimism's lag no longer exist and it is time for launch a counter-attack.

Optimism has a disadvantage over Arbitrum in terms of the ease of exchange deposits and withdrawals. Most of the mainstream exchanges support direct deposits and withdrawals on the Arbitrum network, while only a few mainstream exchanges such as Huobi support the same on the Optimism network. If we can quickly keep pace with our rivals in this area, there will be one less disadvantage.

The remaining question is how to build the ecosystem. After all, it is the projects within the ecosystem that can attract funds and users in the long run. With airdrops, token distribution and rewards, the number of eco-projects will certainly surge. Given that the OP ecosystem already has a number of long-proven infrastructure-type projects, it is more likely that we will see more emerging quality projects in this environment. The possibility of overtaking Arbitrum as the number one OP Rollup platform is also within reach.

Here's a comparison of the two numbers to see how difficult it would be for Optimism to become number one.

Table 3: Comparison of the statistics of Arbitrum and Optimism

	TVL (M)	Protocols	Unique Addresses	Transactions per Day (K)
Arbitrum	3570	76	537	73.6
Optimism	662	33	350	70
	18.54%	43.42%	65.18%	95.11%

Source: L2Beat, DefiLlama, Arbiscan, Optimistic.Etherscan

The OP network has become more active due to the stimulation effect of airdrops. The difference in the number of daily transactions between the two has narrowed, and this metric is the easiest to see results in the short term. OP still lags substantially in all remaining metrics, especially in terms of TVL. Will issuing tokens help Optimism close the gap with Arbitrum's TVL over time?

Let's do a rough calculation. First, since the OP token itself has value, it will bring some money to the network. After 3 months, OP token circulation has a total of 5% of the first airdrop + 6.25% of the remaining 25% of tokens released linearly, for a total of 11.25%. Using the analogous examples of Boba and Metis, which are similar projects, the fully diluted market value of OP is calculated based on the equal TVL/FDV of similar products. Further, considering that OP is technically strong and backed by top capital, the valuation may be higher. The FDV in the table may be 20% higher again, and the total market cap of OP may reach US\$2 billion. This means there will be US\$225 million worth of OP tokens generated after 3 months.

Table 4: Valuation Analogues for OP Rollup

	TVL (M)	FDV (M)
OP	662	1700
BOBA	157	550
METIS	288	590

Source: L2Beat, CoinMarketcap

If the decentralized Sequencer is implemented and the auction is done by pledging OP tokens (similar to the slot auction of Polka), this will stimulate demand for OP tokens. If Gas on Optimism can be settled in OP and an EIP-1559 mechanism is introduced to burn tokens, the demand for tokens will become even stronger. These factors have the potential to raise the OP token price, with the token price estimated to double to reach a valuation of 450 million.

Further considerations are that officials may attract more project deployments through incentives, which in turn will bring in more users and funding. The above amount could be doubled again, which would give us an additional 900 million in funding. Based on this calculation, Optimism's TVL would be 1.56 billion, still only half of Arbitrum's, and a far cry from pole position.

However, this estimate is based on Optimism's current TVL. An increase in its TVL will drive up valuation i.e. the token price; and a higher token price will lift the valuation of OP assets which would in turn boost the TVL. With such a "Davis Double Play", it is not impossible for Optimism to become the forerunner.

The Battle Royale has kicked off. No matter who comes out on top in the end, users will be able to enjoy cheaper services and more applications, and Layer 2 will also soar in popularity.

The industry's competitive dynamics may change once more when Optimism and the other three teams issue their respective coins. Beyond observing on the sidelines, we can participate and experience more of the action, and be ready to receive additional airdrops.

4 How to receive the OP follow-up airdrops?

For those who didn't get the first OP airdrop, the pressing questions must be how they can get the second airdrop. This author will give some tips by taking a wild guess based on the rules of this airdrop. Note this section should not be construed as trading advice.

The first airdrop rewarded 2 types of users: early and active users of Optimism, and loyal users of Ethereum. The next airdrop may not reward early users again, and general users are not able to become multi-signers easily, so these two criteria have little reference value.

According to the official definition, repeated use of Optimism means being active, and the standard is to use the app on the platform 4 weeks in a year. In the future, you need to just interact with the app on the platform once a week, or even once a month, which is a criterion that is easy to meet. Optimism has an average gas fee of \$1 or less, which makes the cost not too high. You can follow discussions on the official Twitter feed, keep track of what projects are funded, and go try out that project.

With users encouraged to participate in community governance, OP holders can vote more, and it is expected that DAO participants will definitely be rewarded in the future.

Rewarding Gitcoin donors is in line with Optimism's value of focusing on early-stage projects, and the OP ecosystem can target events that fund early-stage projects with a small donation if there is one. There is no reason to reward others without rewarding themselves first.

The last one rewards users who have used Layer 2 or other public chains, but did not leave Ethereum completely. It rewards users who are willing to explore and yet value their early relationship with Ethereum. It is unclear if this reward will still be available in the future, but this criterion may be disregarded as it is almost impossible for users to change their behavior to meet it.

The criteria would likely be different from the previous ones, and some new plus points might be added. Users will still need to see and use more, and if they can get some more transactional gains in the process of interaction or find a promising new project, that would be even better.

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THE END