



Token Unlocks Annual Report

2022

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Annual Report

Welcome to the first annual report of TokenUnlocks. We are delighted to present our insights and analysis to our TokenUnlocks users for the first time.

TokenUnlocks was created to address the transparency issues present in many crypto projects. These projects may not adhere to vesting schedules outlined in their whitepapers and may not readily provide access to project data. Token unlocks, or the event at which vested tokens become liquid on the market is a significant component of any tokenomics design. Key data related to token unlocks include the unlock date, the size of the unlock, release mechanism, and the process of the vesting.

This report will cover the fundamentals of token unlocks, provide a retrospective on the year 2022, discuss token unlocks implementation we observed, analyze token distributions, identify significant changes in tokenomics, examine the price impact of unlocks, and delve into major unlocks and insights. We will also provide our thoughts on what we expect to see in 2023 and beyond.

We aim to shed more light on the frequently complex and obscure realm of token unlocks and tokenomics, with the hope that our insights can assist individuals in the crypto space to navigate this thrilling yet sometimes intimidating landscape with confidence.

The team behind TokenUnlocks is a startup with expertise in data, AI, and crypto. We are eager to apply our diverse skillsets to solve problems and enhance the visibility of the crypto space by offering clear, easy-to-digest data. We are proud to have won the DAOHack hackathon, hosted by ETHGlobal, and look forward to continuing to serve as a valuable resource for those interested in staying informed about token unlocks and tokenomics.

A big thanks to all of our TokenUnlocks team for their hard effort in creating this annual report, including writing, data preparation, and visualization. Their dedication has made this report possible.

DISCLAIMER: The information contained within this report is intended for educational purposes only and should not be construed as financial advice. The authors of this report strive to provide an impartial and comprehensive analysis, with the ultimate goal of promoting transparency and understanding in the crypto industry.

What is token unlock?

Before we delve deeper into our annual report, let us first establish a clear understanding of the basics. Token unlock, also known as vesting schedule, is one of the fundamental aspects of tokenomics. It refers to the process of releasing locked tokens into the market over a set period of time. The objective of token unlocks is to align incentives between the project's creators, investors, and users.

Similar to the release of shares through initial public offerings or lockup periods in the stock market, token unlocks serve to ensure that all stakeholders of the project are aligned and that the value of the token is tied to the project's success.

The key elements related to token unlocks include

Data	Description
Vesting Methods	The way in which the tokens are vested, which can include vesting in smart contracts, EOA (Externally-Owned-Address) or simply regular wallets, multi-sig treasury, and more.
Release Mechanism	The method used to unlock the tokens, which generally separate to two groups linear unlocks and cliff unlocks
Unlock Date or Period	For a cliff unlock, the date on which the locked tokens are released into the market. For linear unlock, the period which the linear unlocks start and end
Token Unlock Size	The total number of tokens that will be unlocked. At that particular date or period

When it comes to releasing mechanism, there are two main types, linear and cliff unlocks as explained in the table below:

Release Mechanism	Description
Cliff Unlocks	Tokens are held in a locked state until a specific event or date occurs, after which they will all be released at once.
Linear Unlocks	Tokens are released at a steady, fixed rate over a period of time. For example, if 30% of tokens are set to be unlocked within a month. Then the token will be releasing roughly 1% per day, or in some cases, it will be releasing every x% per transaction block if they are vested in a smart contract.

To illustrate further, we show the LOOKSRARE team token vesting schedule in the yellow stair-step figure below. As you can see below: roughly 25% of the team allocation (10% of total supply) tokens are unlocked every half a year. This can be translated into 2.5% of the total supply being unlocked every ~6 months four times. Thus TokenUnlocks team refers to this vesting setup as having **four cliffs unlocks** for simplicity.

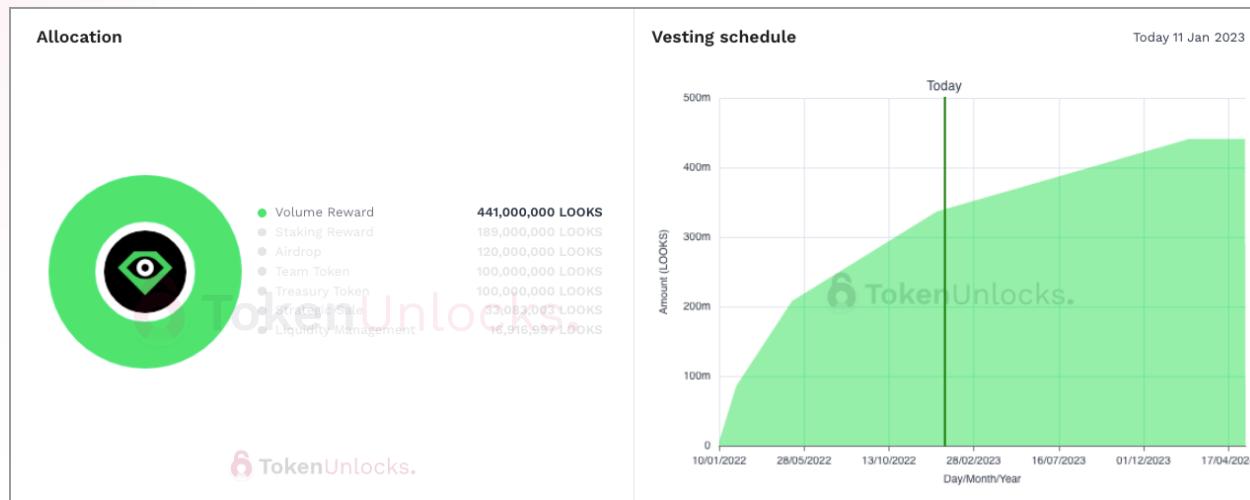


In contrast, an example of a linear unlock is shown in the green slope figure below. This is LooksRare's volume reward emission schedule and they described the vesting detail as follows:

"Trading rewards are calculated daily and rewarded to users 2 hours after the end of each day. The entire schedule of trading reward emissions will be over 4,686,250 Ethereum

blocks (around 2 years) - LOOKS allocated (per day) on The first 30 days = 2,866,500.00, Next 90 days = 1,361,587.50, Next 240 days = 537,468.75, Next 361 days = 286,650.00"

Those long explanations may not be easily conceived in text. But can be visually represented as changing the slope chart below. TokenUnlocks team refers to this vesting schedule setup as **four linear unlocks** with different emission rates.



What are the major differences?. Linear unlocks release tokens at a steady rate while cliff unlocks release all tokens at once. Linear unlocks can provide stability and predictability while cliff unlocks can provide rapid growth and a one-time event to create hype. However, linear unlocks can take longer to release all tokens and can be affected by market conditions and project performance, while cliff unlocks can be highly volatile and create extreme price fluctuations. The choice between the two will depend on the specific goals and circumstances of the project. Most of the time it is a mix of both for example; Airdrops are often released in cliff unlocks while liquidity incentives are usually in linear unlocks.

It is also important to note that the success of a project's tokenomics is not only determined by the design of the vesting method or schedule but also by the overall usefulness and potential of the product. A well-designed token economy, alone, cannot make a project successful if the product itself is not viable.

2022 Lookback

The year 2022 was marked by a significant decline in the global crypto market capitalization, with a drop of approximately 64% from \$2.3 trillion to \$827 billion according to CoinGecko data. The two largest cryptocurrencies by market capitalization, Bitcoin and Ethereum, also experienced substantial declines, falling 64% and 67%, respectively. This decline was influenced by several major events, including the collapse of the Terra ecosystem, which led to the bankruptcy of several major crypto companies. Additionally, the fraud case of the crypto exchange FTX also gave us a huge surprise in Q4 2022. Another overlooked aspect that contributed to the decline in the crypto market was the impact of token unlocks which introduced an influx of newly liquid tokens. Investors are then able to freely move their tokens. With all that being said, let's dive deeper into our data and explore the numbers that we have curated for this report.

We launched the Token.Unlocks.app on the 4th of July 2022 since then we have been tracking a total of 143 protocols as of 31 December 2022, the two tables below summarize what we are tracking in key numbers.

Onchain tracking	13
White paper tracking	29
DAO Maker tracking ¹	101
Total:	143

Category	MarketCap (MCAP)	Fully Diluted Value (FDV)	Project
DEFI	\$8,729,361,403	\$14,657,630,000	16
Blockchain	\$8,521,375,405	\$16,182,890,000	7
DAO	\$2,821,939,699	\$11,426,310,000	6
Metaverse	\$2,357,056,660	\$4,371,589,000	3
CEX	\$328,895,112	\$416,500,000	3
NFT	\$270,598,967	\$1,971,456,000	3
Infra	\$86,549,739	\$444,399,000	1
Total	\$23,115,776,985	\$49,470,774,000	39 ²

¹ Thanks to DAO Maker who provided us the data to track their project promoting transparency for the projects.

² Some projects are tagged with multiple categories thus, double count occurs.

We track 7 main project categories that cover up to around \$23B in market cap (excluding DAO Maker's) which is roughly 2.6% compared to the total \$872B crypto market cap at the start of 2023. A long way to go for our team to track all of them! Next, let's see the overview of our tracked token unlocks.

Surprisingly the value of the tokens locked (only the distribution allocation excluding other parts eg. staked, liquidity mining, collateralization) of our 38 tracked tokens³ at the beginning of 2022 was \$142.51 billion worth while it is only \$14.66B at the start of 2023. That is a 89.7% decline in locked values. This value reduction was mainly due to a drastic decline in price and the amount of tokens released during the year 2022.



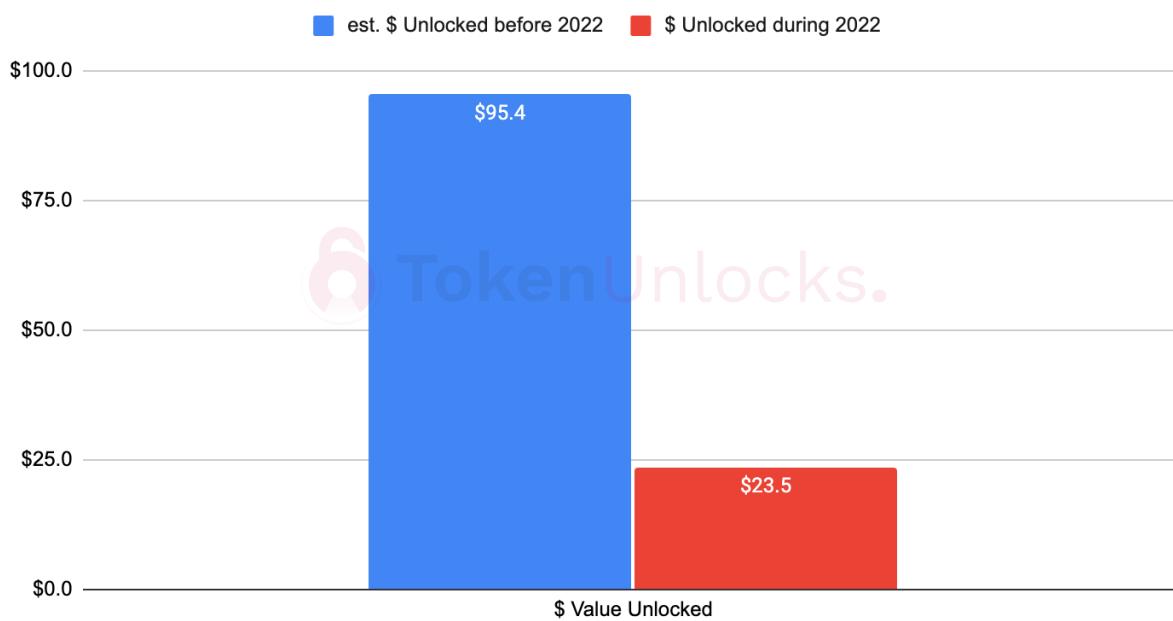
	1/1/2022	1/1/2023
\$ Value Locked ⁴ (token amount x price) @ 1st Jan	\$142,505,203,267	\$14,658,748,846

³ The 38 tokens on-chain and white paper tracking exclude: Aptos, SweatCoin, Mina protocol, and Moonbeam due to the infinite token supply and price data issue.

⁴\$ Value locked = (max total supply - total token unlocks @ 1 Jan) x token price @ 1 Jan

The estimated value for 38 tokens unlocked prior to 2022 is \$95.4B (assuming the price at 31 December 2021). While for the unlocks during the year 2022 we could provide more accurate data with its daily price at the time of unlocks. The value unlocked during 2022 is \$23.5B. Comparatively, the value unlocked in 2022 alone is 24.6% compared to all the prior years combined. There is an interesting insight when we compare the decline of locked value on a year to year basis with the unlocked value during 2022. The decline in locked value is calculated as follows: \$142.5B - \$14.7B = \$127.8B. Considering that the unlocks value was \$23.5B. Imagine if the investor sold all their position at the unlock date throughout the year, they may on average capture values of only $\$23.5B/\$127.8B = 18.4\%$ of the original locked value. The other 71.6% may have already been absorbed by the public market. This is only a rough estimation when in practice it involves various factors such as liquidity at that time, macro effects, staking yield from the tokens, etc.

Value Unlocks (\$) prior to 2022 vs during 2022 (38 tokens)



⁵ Estimated \$ Unlocked before 2022 = estimated total token unlocks prior to 2022 x price @ 31 December 2021

\$ Unlocked during 2022 = Sum of (daily token unlocks amount x daily price at unlocks)

TokenUnlocks categorizes and focuses on tracking two releasing mechanisms⁶: cliff and linear unlocks. The table below shows the breakdown of cliff vs linear unlocks value that we observed in 2022. The data shows that 61% (\$14.4B/\$23.5B) of value was in cliff unlocks while 39% was in linear unlocks. We also see that value unlocks had more than tripled in the first half of 2022 compared to the later half of the year. Finally, TokenUnlocks was able to amplify this information to our users with a total value of \$5.7B unlocked tokens

Releasing Mechanism	Before TokenUnlocks (1 Jan - 3 July 2022) ⁷	TokenUnlocks start (4 July -31 Dec 2022)	Total
Cliff unlocks	\$11,639,028,764	\$2,800,304,382	\$14,439,333,146
Linear unlocks	\$6,164,666,544	\$2,924,234,739	\$9,088,901,283
Total:	\$17,803,695,308	\$5,724,539,1215	\$23,528,234,429

⁶ See section “What is a token unlock?” sections for our description on releasing mechanism (cliff and linear unlocks)

⁷ The value of unlocks calculated by amount of unlock token x price at the unlocks date

How do projects vest their tokens?

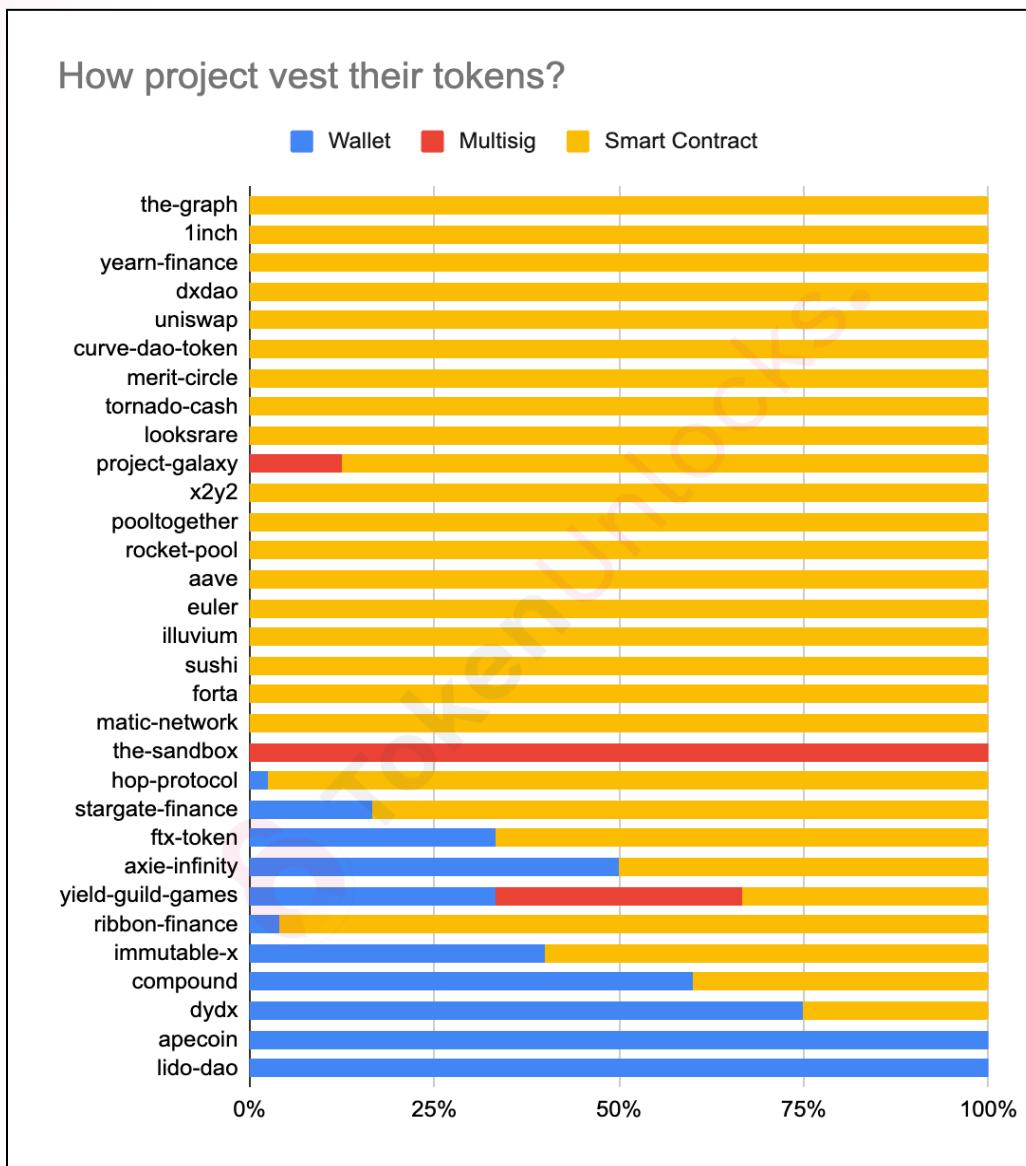
When it comes to token vesting methods (how they keep their tokens locked before distribution), there are a variety of ways that a project can implement to ensure a fair and orderly distribution of tokens. One such method is to keep the token in EOA (externally owned address) or wallet, which allows token holders to hold their tokens in their controlled wallets. This method provides the most flexibility to operate token distribution, allowing them to manage their own tokens as they see fit. Another option for a project is to use a multi-sig treasury. This method involves the use of multiple signature (multi-sig) wallets, where a set of signatures are required in order to access the funds. This can provide added security for the project and its token holders, as well as a higher degree of accountability. Finally, a project may choose to use a customized vesting contract. This method allows for the creation of a smart contract that can automatically lock and release tokens over a set period of time. This can be useful for projects looking to align the interests of the team and token holders, and also to avoid a large selling pressure.

We analyzed 31 protocols along with their 2,572 addresses and see how they implement their token vesting. There are 2 projects that use only EOA or wallets to vest their tokens, 20 projects decide to utilize only smart contracts to aid the vesting, and 9 projects use both wallets and smart contracts.

	Project Count
EOA Wallets Only	2
Smart Contracts Only	20
Wallets + Smart Contracts	9
Total:	31

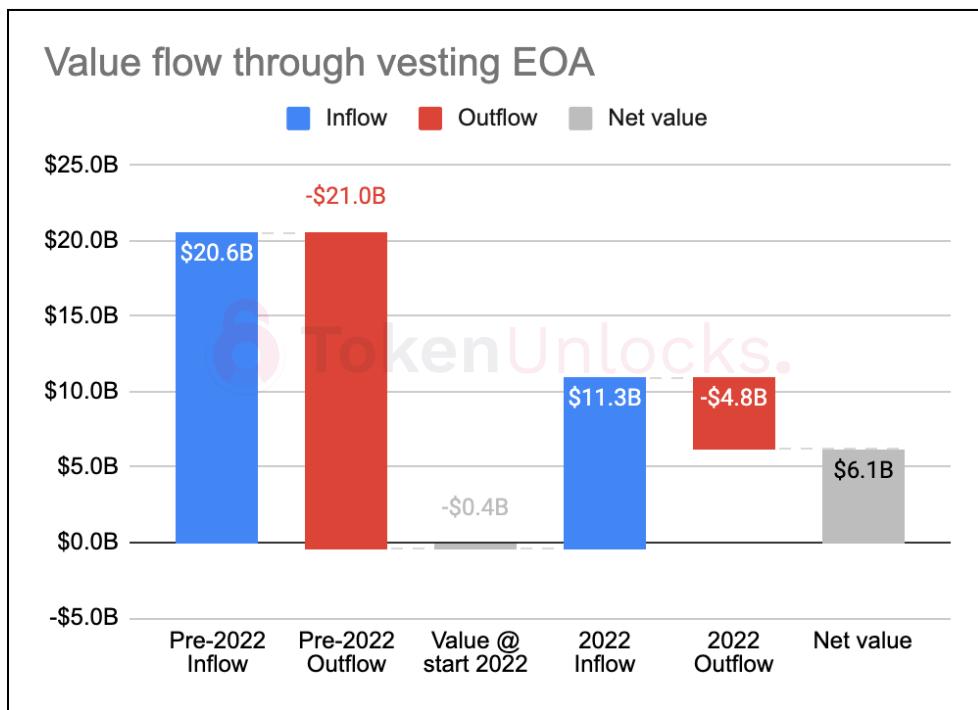
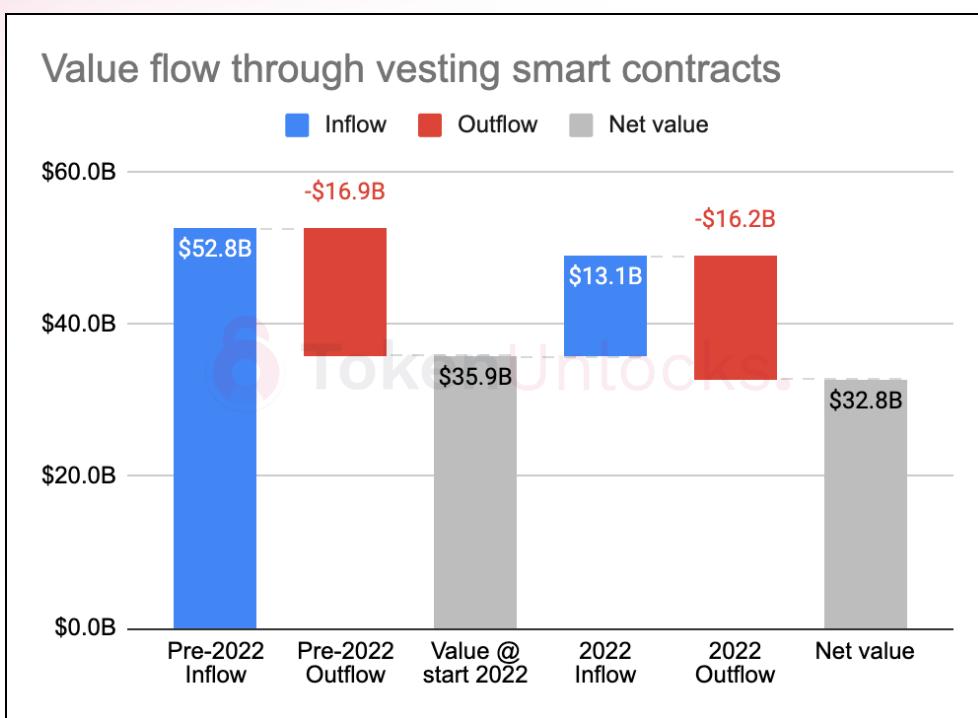
	Address Count
EOA Wallets	219
Multi-Sigs	3
Smart Contracts	2,350
Total:	2,572

Chart below shows the distribution of how they vest their tokens. ApeCoin, Lido⁸, and DyDx show that they are quite flexible with how they are going to distribute their tokens, and interestingly ApeCoin has more than 150 wallets for their vesting and treasury!



Next, we evaluate how much the token value flows into and out of those vesting methods. The two charts below illustrate the token values inflow and outflow that pass through those 2,572 addresses. We also grouped the data by Pre-2022 and within the year 2022 to illustrate the difference between bull and bear.

⁸ LDO is in EOA category but the token contract itself is used to lock the funds



The value flowed⁹ through vesting smart contracts prior to 2022 totaled to \$52 billion, was secured in vesting smart contracts. Of this, only \$16.9 billion was distributed or claimed. In comparison, the inflow of value through the use of externally-owned

⁹ Value flow is calculated by the token amount flowing in or flowing out of the address (wallets or smart contract) multiply by the token price at that day

addresses (EOAs) was \$20.6 billion, with an outflow of \$21 billion. EOAs provide more flexibility but less security than vesting smart contracts, this is in line with data showing that projects choose to hold most of their value longer within vesting contracts. As of the end of 2022, the net value retained in vesting contracts was \$32.2B, in contrast to the net value retained in EOA methods, which was \$6.1B.

The Distribution

With an array of tokens that have been collected, ranging from Layer 1, Layer 2, Dex, Gaming, and more, there are numerous types of token distributions that could be classified into four distinct distribution types.

Core / Team

This distribution is focused on rewarding the developers or core team for their hard work and dedication to the project. This type of distribution is essential for any project to have in order to ensure that everyone involved is suitably compensated for their efforts.

Treasury

This portion of tokens is made available for the project's treasury, which can be used for a variety of purposes, such as marketing or other activities. It is important for projects to have a treasury in order to support their development and growth.

Investor

In the early stages of a project, it is necessary to allocate tokens to investors in order to ensure that the project is adequately funded and that it can reach its full potential.

Public / Community

This part of the token allocation is designed to reward the public or the community for their involvement and support of the project. By ensuring that members of the public and the community have a stake in the project, the project can grow and develop more sustainably.

Token Allocation Analysis

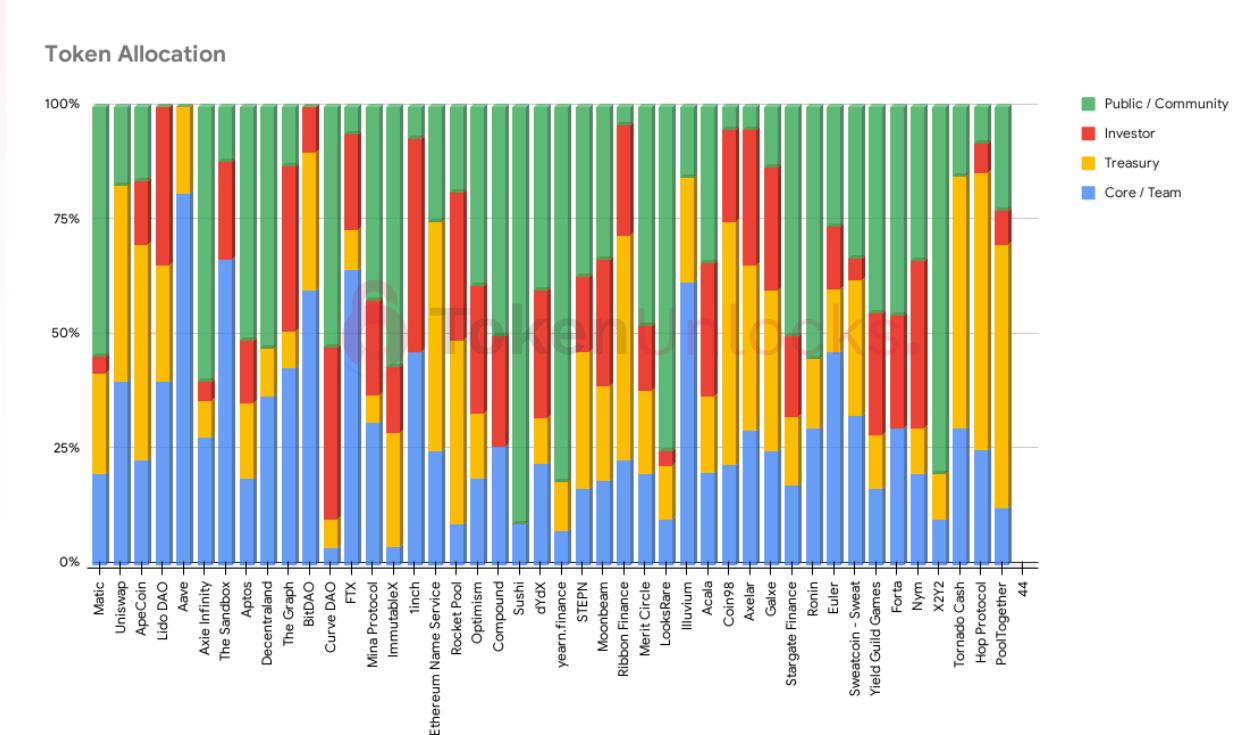
There are 44 projects¹⁰ that have been selected for this analysis in order to evaluate the allocation of resources. Each project has been carefully selected to ensure that the results of the analysis are as accurate as possible.

¹⁰ 2022 TokenUnlocks stats refer to 38 tokens, this 44 tokens include the ongoing project that were not published yet in our website.

Project	Source	MCap (M)	FDV (M)	Market Cap/FDV	Core / Team (%)	Investor (%)	Treasury (%)	Public / Commu. (%)
Matic	Whitepaper	7,743	8,637	0.90	20.00	3.80	21.86	54.33
Uniswap	On-chain	4,341	5,759	0.75	40.00	0.00	43.00	17.00
ApeCoin	On-chain	1,793	4,864	0.37	23.00	14.00	47.00	16.00
Lido DAO	On-chain	1,550	1,864	0.83	40.17	34.61	25.21	0.00
Aave	Whitepaper	875	984	0.89	81.25	0.00	18.75	0.00
Axie Infinity	On-chain	844	1,986	0.43	28.00	4.00	8.00	60.00
The Sandbox	Whitepaper	792	1,512	0.52	66.82	21.18	0.00	12.00
Aptos	Whitepaper	687	5,290	0.13	19.00	13.48	16.50	51.02
Decentraland	On-chain	719	866	0.83	36.85	0.00	10.45	52.70
The Graph	Whitepaper	526	710	0.74	43.15	35.97	7.97	12.90
BitDAO	On-chain	471	4,384	0.11	60.00	10.00	30.00	0.00
Curve DAO	On-chain	436	2,215	0.20	3.76	37.57	6.26	52.41
FTX	Whitepaper	397	397	1.00	64.51	20.99	8.70	5.80
Mina Protocol	Whitepaper	428	529	0.81	31.12	20.54	6.00	42.33
ImmutableX	Whitepaper	368	960	0.38	4.00	14.26	25.00	56.74
1inch	On-chain	335	637	0.53	46.49	46.49	0.00	7.02
ENS	On-chain	315	1,220	0.26	25.00	0.00	50.00	25.00
Rocket Pool	Whitepaper	484	484	1.00	9.00	32.40	40.00	18.60
Optimism	Whitepaper	273	5,467	0.05	19.00	27.80	14.20	39.00
Compound	Whitepaper	245	357	0.69	25.99	23.96	0.00	50.05
Sushi	On-chain	211	274	0.77	9.09	0.00	0.00	90.91
dYdX	Whitepaper	192	1,335	0.14	22.27	27.73	10.00	40.00
yearn.finance	On-chain	192	214	0.89	7.60	0.00	10.58	81.82
STEPN	Whitepaper	180	1,799	0.10	16.70	16.30	30.00	37.00
Moonbeam	Whitepaper	166	354	0.47	18.55	27.40	20.68	33.38
Ribbon Finance	Whitepaper	109	180	0.61	23.00	24.00	49.00	4.00
Merit Circle	On-chain	93	187	0.50	20.00	14.06	18.25	47.69
LooksRare	On-chain	90	166	0.54	10.00	3.31	11.69	75.00
Illuvium	On-chain	93	478	0.19	61.87	0.00	22.71	15.42
Acala	Whitepaper	71	115	0.61	20.25	29.13	16.62	34.00
Coin98	Whitepaper	62	181	0.34	22.00	20.00	53.00	5.00
Axelar	Whitepaper	62	535	0.12	29.50	29.54	35.96	5.00
Galxe	Whitepaper	58	248	0.23	25.00	27.00	35.00	13.00
Stargate Finance	Whitepaper	53	386	0.14	17.50	17.50	15.00	50.00
Ronin	Whitepaper	53	356	0.15	30.00	0.00	15.00	55.00
Euler	Whitepaper	49	97	0.51	46.50	13.67	13.83	26.00
Sweatcoin	Whitepaper	42	249	0.17	32.60	4.89	29.60	32.91
Yield Guild Games	Whitepaper	38	208	0.19	16.75	26.58	11.67	45.00
Forsta	Whitepaper	25	126	0.20	30.00	24.50	0.00	45.50
Nym	Whitepaper	13	183	0.07	20.00	36.50	10.00	33.50
X2Y2	On-chain	9	73	0.12	10.00	0.00	10.00	80.00
Tornado Cash	On-chain	6	41	0.15	30.00	0.00	55.00	15.00
Hop Protocol	Whitepaper	4	68	0.06	25.25	6.25	60.50	8.00
PoolTogether	Whitepaper	2	5	0.31	12.44	7.52	57.54	22.50

From this data table sorted by market capitalization, the cell is set up so that the darker color on each cell shows the higher the percentage of allocation. Regarding Core / Team and Investor allocation, the dark-colored cells in the table tend to be near the top. This indicates that the higher the token allocation to the Core / Team and Investor, the greater the potential for the project to achieve a high market capitalization. This is due to the fact that having more tokens allocated to those groups can help increase the overall liquidity of the project, which in turn can lead to a higher market capitalization. Additionally, having more tokens allocated to investor groups can help attract more investors, as it shows confidence in the project and can lead to more capital being invested.

The chart below demonstrates the token allocation of each project. They do not share the same distribution design at all. In fact, some projects have no investor or treasury allocations, while others have allocated the majority of their tokens to the core team. This stark contrast between the allocations of each project is a prime example of the variety of token distributions that can be seen throughout the industry.

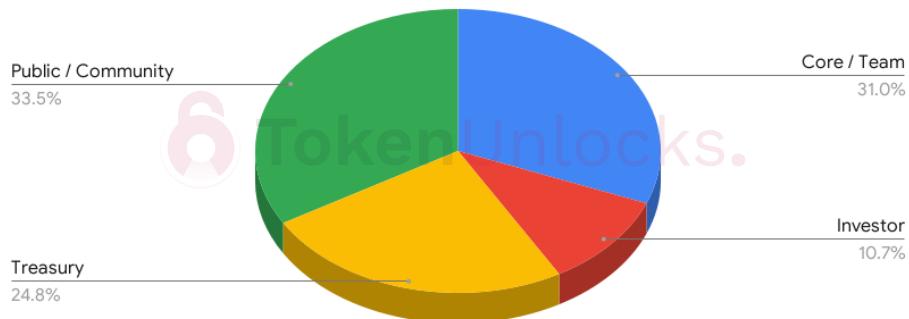


Taking the average from each project and using it equally in the calculation might be biased, and there is one more metric that should be considered. Market Capitalization is a popular method used to rank projects, and thus should be weighed into the token allocation pie chart. In fact, the average token allocation pie chart is calculated by weighting the market capitalization¹¹, making it a great way to compare projects and understand the worth of each individual project. Consequently, on a weighted average, here are the allocation of token value to each entity;

Core / Team	Treasury	Investor	Public / Community
31.0%	24.8%	10.7%	33.5%

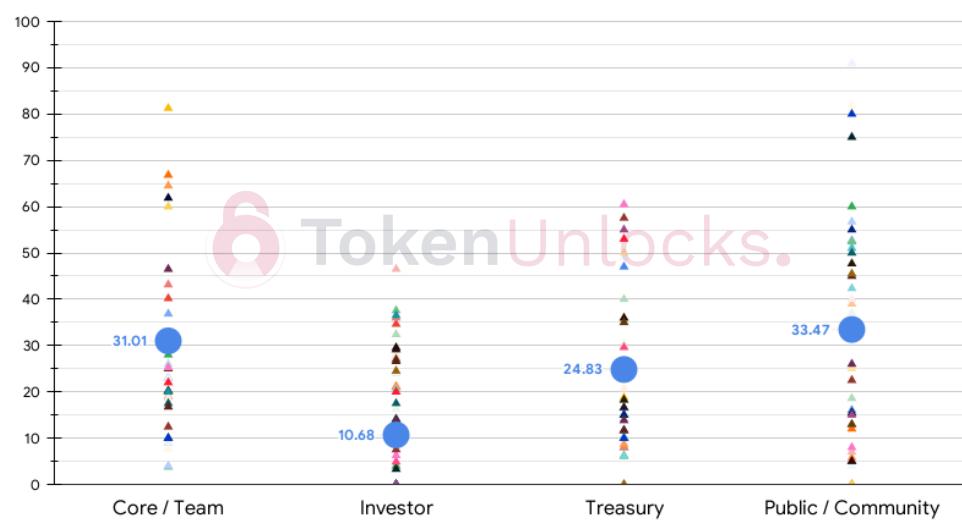
¹¹ For example: Team Allocation Weighted Avg for Project A and B = $\frac{[(\text{Project A Team Alloc \%} * \text{Project A Market Cap}) + (\text{Project B Team Alloc \%} * \text{Project B Market Cap})]}{\text{Sum of Project A \& B Market Cap}}$

Token Allocation - Weighted Average



This visualization provides an insightful overview of how each project has carefully arranged its token allocation. The blue circle denotes the weighted average of a particular category.

Token Allocation by Type



Another important metric to consider is the percentage of relative change (Rltv Chng.) between its own allocation and the weighted average allocation, as the table below demonstrates.

Project	Source	MCap (M)	FDV (M)	Market Cap/FDV	Core / Team - Rltv Chng.	Investor - Rltv Chng.	Treasury - Rltv Chng.	Public / Commu. - Rltv Chng.
Matic	Whitepaper	7,743	8,637	0.90	-36%	-64%	-12%	62%
Uniswap	On-chain	4,341	5,759	0.75	29%	-100%	73%	-49%
ApeCoin	On-chain	1,793	4,864	0.37	-26%	31%	89%	-52%
Lido DAO	On-chain	1,550	1,864	0.83	30%	224%	2%	-100%
Aave	Whitepaper	875	984	0.89	162%	-100%	-24%	-100%
Axie Infinity	On-chain	844	1,986	0.43	-10%	-63%	-68%	79%
The Sandbox	Whitepaper	792	1,512	0.52	115%	98%	-100%	-64%
Aptos	Whitepaper	687	5,290	0.13	-39%	26%	-34%	52%
Decentraland	On-chain	719	866	0.83	19%	-100%	-58%	57%
The Graph	Whitepaper	526	710	0.74	39%	237%	-68%	-61%
BitDAO	On-chain	471	4,384	0.11	93%	-6%	21%	-100%
Curve DAO	On-chain	436	2,215	0.20	-88%	252%	-75%	57%
FTX	Whitepaper	397	397	1.00	108%	96%	-65%	-83%
Mina Protocol	Whitepaper	428	529	0.81	0%	92%	-76%	26%
ImmutableX	Whitepaper	368	960	0.38	-87%	33%	1%	70%
1inch	On-chain	335	637	0.53	50%	335%	-100%	-79%
ENS	On-chain	315	1,220	0.26	-19%	-100%	101%	-25%
Rocket Pool	Whitepaper	484	484	1.00	-71%	203%	61%	-44%
Optimism	Whitepaper	273	5,467	0.05	-39%	160%	-43%	17%
Compound	Whitepaper	245	357	0.69	-16%	124%	-100%	50%
Sushi	On-chain	211	274	0.77	-71%	-100%	-100%	172%
dYdX	Whitepaper	192	1,335	0.14	-28%	160%	-60%	20%
yearn.finance	On-chain	192	214	0.89	-76%	-100%	-57%	144%
STEPN	Whitepaper	180	1,799	0.10	-46%	53%	21%	11%
Moonbeam	Whitepaper	166	354	0.47	-40%	156%	-17%	0%
Ribbon Finance	Whitepaper	109	180	0.61	-26%	125%	97%	-88%
Merit Circle	On-chain	93	187	0.50	-36%	32%	-27%	42%
LooksRare	On-chain	90	166	0.54	-68%	-69%	-53%	124%
Illuvium	On-chain	93	478	0.19	99%	-100%	-9%	-54%
Acala	Whitepaper	71	115	0.61	-35%	173%	-33%	2%
Coin98	Whitepaper	62	181	0.34	-29%	87%	113%	-85%
Axelar	Whitepaper	62	535	0.12	-5%	176%	45%	-85%
Galxe	Whitepaper	58	248	0.23	-19%	153%	41%	-61%
Stargate Finance	Whitepaper	53	386	0.14	-44%	64%	-40%	49%
Ronin	Whitepaper	53	356	0.15	-3%	-100%	-40%	64%
Euler	Whitepaper	49	97	0.51	50%	28%	-44%	-22%
Sweatcoin	Whitepaper	42	249	0.17	5%	-54%	19%	-2%
YGG	Whitepaper	38	208	0.19	-46%	149%	-53%	34%
Forsta	Whitepaper	25	126	0.20	-3%	129%	-100%	36%
Nym	Whitepaper	13	183	0.07	-36%	242%	-60%	0%
X2Y2	On-chain	9	73	0.12	-68%	-100%	-60%	139%
Tornado Cash	On-chain	6	41	0.15	-3%	-100%	121%	-55%
Hop Protocol	Whitepaper	4	68	0.06	-19%	-42%	144%	-76%
PoolTogether	Whitepaper	2	5	0.31	-60%	-30%	132%	-33%

The darker the color, the further away from the weighted average. From this perspective, it is not necessarily the case that the best token distribution must follow the weighted average that was discussed earlier; this is due to the fact that the white highlighted cells in the table were seen to be scattered around the table, indicating a wide range of possible values. Nevertheless, it could be taken into consideration as a general guide. Moreover, it is important to consider other factors in the equation, such as the type of project, the industry's outlook, product viability, and the potential future growth of the token. All of these elements should be taken into account when making a decision about the best way to allocate tokens.

Major changes in tokenomics

In the world of cryptocurrency, tokenomics plays a crucial role in determining the value and utility of a particular token. Tokenomics (token's economics) refers to the study of the economic and financial characteristics of a token, including its issuance, distribution, and management. In this report, we will be providing an overview of the noteworthy tokenomics changes that took place in 2022.

Bitcoin (BTC)

In recent upgrades, specifically on May 15, 2022, Bitcoin activated a new upgrade called "Taproot" which improved the privacy and scalability of the network by allowing for more complex smart contract functionality while also improving the efficiency of the network. This upgrade also allows for more privacy-preserving transactions on the network, increasing the adoption and usage of Bitcoin in various transactions and use-cases.

Ethereum (ETH)

Ethereum (ETH) underwent a merge on September 15th, 2022, which changed the network from a proof-of-work (PoW) consensus algorithm to a proof-of-stake (PoS) algorithm. The Merge resulted in a decrease of ETH issuance from 4.2% to 0.2% and with a burning mechanism, the network is projected to achieve net deflation of 1-2%, depending on transaction volume.

Cosmos (ATOM)

In September of 2022, a whitepaper for Cosmos upgrade was released. It proposes a new tokenomics design which is designed to increase the scalability and security of the network, and to make the token issuance rate more predictable. The upgrade includes a transition period where the ATOM issuance rate will fall from 10M to 0.3M tokens per month over a 36-month period. After 3 years, the token issuance will reach a steady state and the ecosystem is expected to be self-sustaining through organic revenue. However, in November, it caused controversy as the community was concerned about the risk involving liquid staking.

Yearn Finance (YFI)

Yearn ramped up its tokenomics at the start of 2022, including distributing \$YFI tokens bought back by the treasury to vault stakers, introducing a new token called veYFI that can be earned by locking \$YFI for a certain duration, allowing vault stakers to earn YFI rewards by staking their xYFI tokens and boosting their rewards by holding veYFI, and giving veYFI holders the ability to earn more rewards by performing "useful works."

SushiSwap (SUSHI)

On December 11, 2022, Sushi CEO announced that emissions-based rewards are unsustainable and the platform plans to revamp tokenomics to no longer subsidize liquidity providers. As VE (vote escrow) tokenomics have proven to be successful across multiple protocols, Sushi is researching the VE and gauging the model's viability and are looking to implement the model in Sushi's tokenomics and governance.

Nym (NYM)

On November 23, 2022, updates were made to tokenomics with a circulating supply of 304 million and staking supply of 349 million. Tokens can be staked on nodes in the Nym mixnet, with a capped portion at 10% to retain distribution and better rewards for stakers. NYM is used to secure the network, incentivize node operators, and for governance.

PancakeSwap (CAKE)

On May 22, 2022, the community voted to cap the total supply at 750 million, with an emission rate of 14.25 CAKE per block, to be reached in three years. The new tokenomics also provide locked CAKE derivatives with numerous utilities and a 10% reduction in emissions to the protocol's Syrup Pool to decrease inflation. It uses a unique tokenomics system called vote-to-slip (V2S) for community voting on proposals.

X2Y2 (X2Y2)

X2Y2 changed its reward system from NFT listing rewards to trading rewards, distributing 624,902 \$X2Y2 tokens daily. The platform trading fees will be distributed among X2Y2 stakers starting May 1, 2022 to incentivize staking.

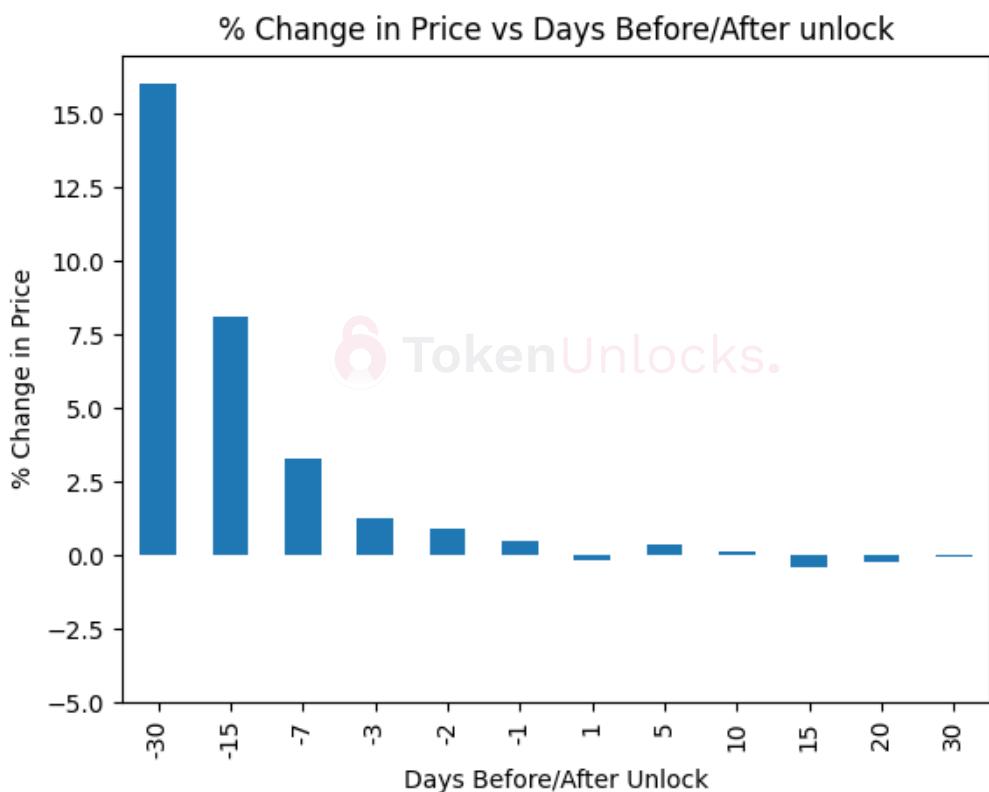
A recap table for projects with tokenomics changes in 2022:

Token	Supply	Inflation	Tokenomics Changes
BTC	21 million	Decreasing	Taproot upgrade for privacy/scalability
ETH	No limit	2-4% annually	PoS, decreased issuance, burning mechanism
ATOM	No limit	7~20% annually	Cosmos 2.0 upgrade, decreased issuance
YEARN	36,666	Fixed supply	Increased token utility, aligned incentives
SUSHI	250 million	Decreasing	Revamping tokenomics, no longer subsidizing liquidity
NYM	1 billion	Decreasing	Updated tokenomics, staking, security/governance
CAKE	750 million	Decreasing	Capped supply, locked derivatives, vote-to-slip
X2Y2	1 billion	Decreasing	Changed rewards, distributed tokens for staking

In conclusion, the crypto market is highly dynamic and ever-evolving. Tokenomics plays a crucial role in the success and sustainability of any cryptocurrency project. The projects discussed above have undergone or plan to undergo tokenomic changes to improve the scalability, security, and utility of the network.

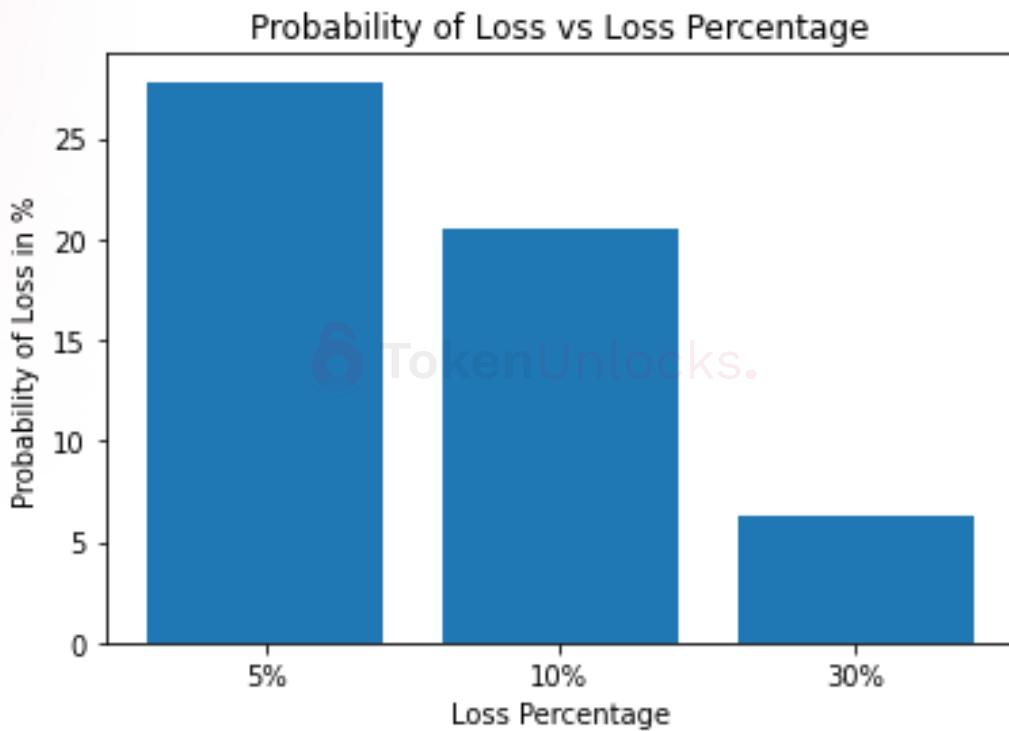
Price impact

In this section we will discuss the general price impact that is affected by token unlocks. As more and more percentage of the total supply is unlocked from the smart contracts or wallets and becomes available in the market, investors would be smart to expect the price of those tokens to fall. After all it seems very straightforward assuming the demand remains the same. We ran an analysis of the data we had collected and found the following.



The x-axis on the graph above shows the number of days before or after an unlock event, negative numbers represent before and positive numbers represent after. The y-axis shows the percentage change in price when compared to the day of unlock. As we can see there's a trend showing that as we approach the unlock day the price tends to decrease by up to 15%! But right after an unlock event, it stays relatively flat. Note that we do this analysis with Bitcoin's price denominator as we think it represents a much fair point of view.

Since we can see from the graph above that token prices tend to fall at unlock day when compared to days prior, we wanted to find out the probability of losing a certain percentage of your position when shorting 30, 15, and 7 days prior.



The data shown suggests that there's a 27% probability of a 5% loss, 20% probability of a 10% loss and 6% probability of a 30% loss. Just as in the previous graph, this takes bitcoin's price action during the short period into account.

Major 2022 Token Unlocks

This section provides deeper insight into four tokens [Sandbox](#) (\$SAND), [LOOKSRARE](#) (\$LOOKS), [Axies Infinity](#) (\$AXS), and [Immutable X](#) (IMX). We purposely hand-picked these four tokens because we observed high user interest during big major unlocks for those four tokens. For example, the \$480M \$Sand unlocks that occurred in August 2022 gained a spike in news and media attention, \$273M worth of \$AXS hit the market in Oct 2022 also causing a major decline while \$LOOKS unlocks shows a bullish trend instead after unlocks. For each token, we cover notable unlocks with price action before and after the unlocks. Additionally, we provide general information and description for each vesting schedule.

\$SAND Unlocks

General Information

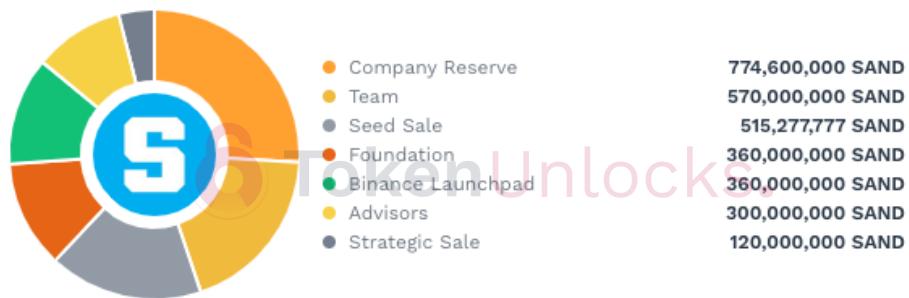
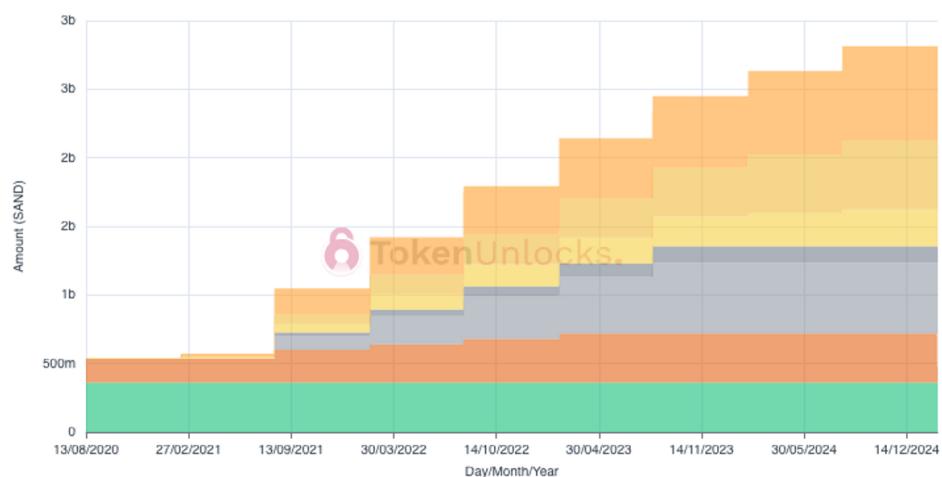
The Sandbox is a virtual metaverse where players can play, build, own, and monetize their gaming experience on the Ethereum Blockchain using NFTs. \$SAND token is an ERC-20 utility token that's used for exchanging goods in the ecosystem. It can be staked as well as govern the ecosystem.

Token Allocation and Vesting Schedule

The token supply for the Sandbox is 3 Billion \$SAND with the following distribution:

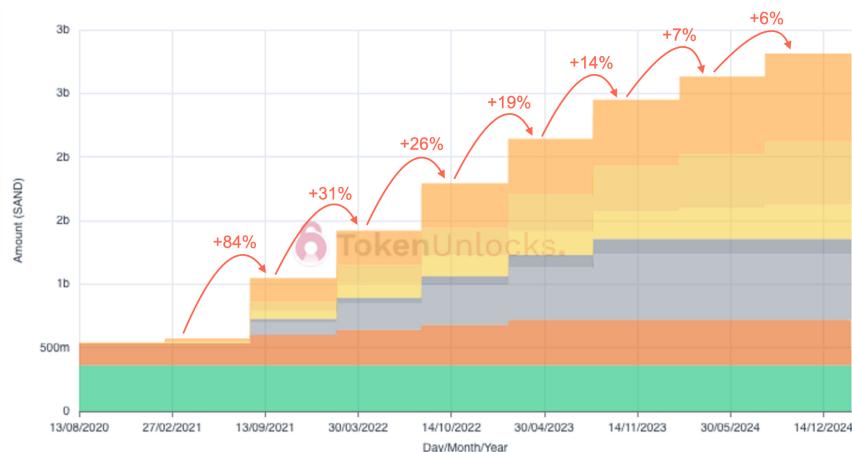
- Company Reserves (25.82%) 774M
- Team (19.5%) 570M
- Seed Sale (17.18%) 515M
- Foundation (12.0%) 360M
- Binance Launchpad (12.0%) 360M
- Advisors (10.0%) 300M
- Strategic Sale (4.0%) 120M

The following graph depicts the vesting schedule. [\\$SAND Dashboard](#)



Notable Unlocks

According to the vesting schedule chart, there are several notable unlocks and they are totally cliff unlocks, no linear unlocks. Despite numerous cliff unlocks, when the time goes by, the amount of unlocks got diminished as the below chart shows.



One thing that might be a concern on each cliff unlock is unlocked tokens amount for Seed Sale, Strategic Sale, Advisors, and Team are 40% approximately combined. It's a considerably high amount and might lead to huge selling pressure, assuming Seed Sale and Strategic Sale had sold their tokens right after they got them. For Advisors and Team tokens, according to on-chain data, they've been sent to exchange immediately after getting their tokens as shown on Etherscan.



Price action before and after unlock

Most recent unlock occurred in the mid of Aug 2022. Prior to the unlock, the correlation between \$ETH (red line) and \$SAND (blue line) price is highly correlated. Nevertheless, after the cliff-unlocked, the \$ETH price decreased from \$1,920 to \$1,600 (-17%) as well as the price of \$SAND dropped by 22% in 4 days after unlocked. Although the \$SAND price was decreased, the \$SAND/\$ETH went up after being unlocked for two weeks, this can be implied that \$SAND overperformed \$ETH. One reason behind this is that all unlocked tokens probably were already sold.

\$SAND Aug'22 unlocks price impact



Additionally, when it was still a bull market during the cliff-unlocked on Feb '22, the price action of \$SAND after unlocked one week still underperformed \$ETH price (\$SAND -19% vs \$ETH -8%). However, there was a pullback of the \$SAND price after that three days while the \$SAND/\$ETH price is slightly the same which means the \$ETH price also increased during that time as well.

\$SAND Feb'22 unlocks price impact



Finally, during the bull market, the selling pressure from unlocked \$SAND still exists as the \$SAND price is underperforming the market (After unlocked 14 days, \$SAND -33% vs \$ETH -15%)

\$LOOKS Unlocks

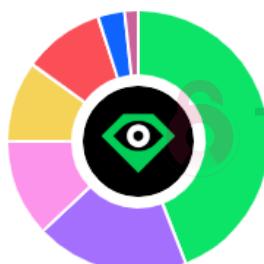
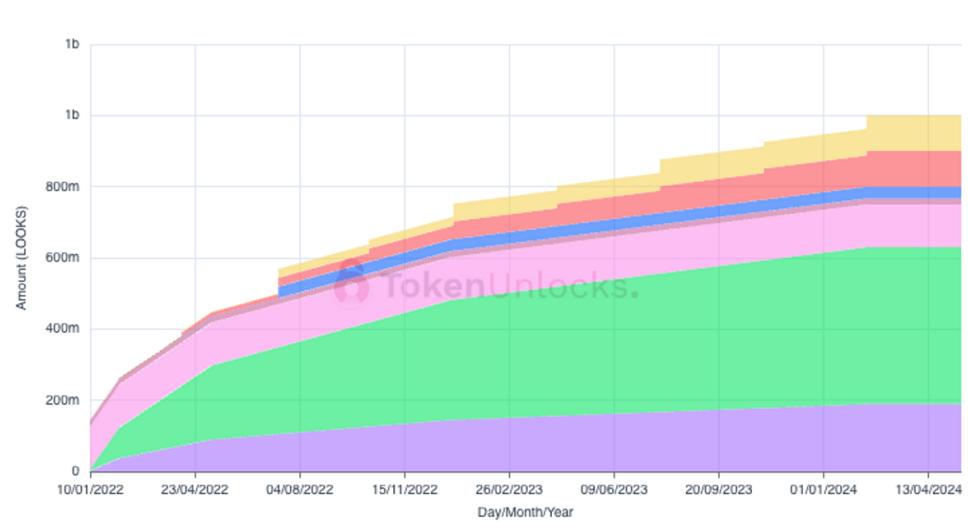
General Information

\$LOOKS is the token from NFT marketplace called LooksRare. \$LOOKS was launched in January 2022 unlike OpenSea, the largest NFT marketplace on Ethereum, which has no platform's own token. \$LOOKS can be staked to earn trading fee.

Token Allocation and Vesting Schedule

LOOKSRARE's maximum supply is 1 billion tokens with the following distribution [\\$LOOKS](#):

- Volume Reward (44.1%) 441M
- Staking Reward (18.9%) 189M
- Airdrop (12.0%) 120M
- Team Token (10.0%) 100M
- Treasury Token (10.0%) 100M
- Strategic Sale (3.3%) 33M
- Liquidity Mngmnt (1.7%) 16.9M



● Volume Reward	441,000,000 LOOKS
● Staking Reward	189,000,000 LOOKS
● Airdrop	120,000,000 LOOKS
● Team Token	100,000,000 LOOKS
● Treasury Token	100,000,000 LOOKS
● Strategic Sale	33,083,003 LOOKS
● Liquidity Management	16,916,997 LOOKS

Notable Unlocks

On 15th July 2022, 70.5 million tokens (7.05% of \$LOOK max supply) has been unlocked which could be breakdown into 3 parts,

1. 3.3% - 33 million tokens for Strategic Sale (First and the only one unlock)
2. 2.5% - 25 million tokens for Team Token (First unlock out of four)
3. 1.25% - 12.5 million tokens for Treasury (Second unlock out of eight)

After this cliff unlock, \$LOOKS price went up 37% in one week as well as the price of \$BTC also increased approximately 30% in one week. Even though the price was pumped, the \$LOOKS/\$ETH price went back to the prior unlock price (red arrow). This can be implied that the \$LOOKS price was not impacted by selling pressure significantly.



Price action before and after unlock

If you consider the price chart of \$LOOKS, it seems there was a bullish unlock as the price of \$LOOKS pumped and the \$LOOKS/\$ETH also increased.



As time went by, the \$LOOKS price went down from \$0.49 to \$0.32 (-65%) in ten days and underperformed \$ETH as the \$LOOKS/\$ETH broke the support line while \$LOOKS didn't break (The \$LOOKS price went down more than the \$ETH price)

Finally, there was a bullish unlock in the short term but after that, there might be selling pressure from unlocked \$LOOKS which made the price of \$LOOK underperformed.

\$AXS Unlocks :

General Information

Axie Infinity developers have a unique approach for growing the in-game economy, focusing on a player-to-player economy where players can buy and sell in-game assets. They use marketplace fees directed towards an AXS-holder-guided Community Treasury, allowing the community to collectively decide how to best use these funds to grow and improve the game. The in-game token, \$AXS, has three functionalities: governance, staking, and payment. As of now, around 67,000 wallet addresses are being used for \$AXS, and around 160 wallet addresses hold more than 10,000 \$AXS. The active player statistics show that an average monthly number of users playing Axie Infinity is estimated to be around 701,000, making it an exciting and dynamic game to be a part of.

Token Allocation and Vesting Schedule

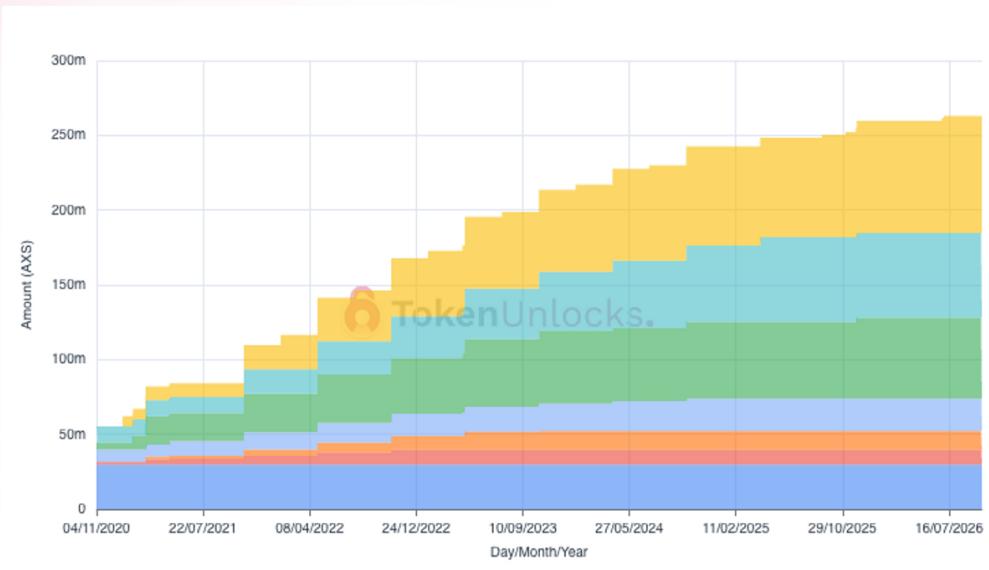
The entire supply of \$AXS is designed to be 270 million, and currently, 115 million \$AXS (~68%) have been unlocked and circulating in the open market. The last unlock is set to take place in July of 2026.

The tokens are distributed as the following:

- Staking Rewards (29%) 78.3M
- Team (21%) 56.7M
- Play to Earn (20%) 54M
- Public Sale (11%) 29.7M
- Ecosystem Fund (8%) 21.6M
- Advisor (7%) 18.9M
- Private Sale (4%) 10.8M

The public sale pricing was set to be \$0.1, and the private sale pricing at \$0.08.

The following graph depicts the vesting schedule, [\\$AXS dashboard](#)



Notable Unlocks

In 2022, the Axie Infinity team implemented four token unlocks to gradually increase the circulating supply of \$AXS. However, the most significant unlock happened on October 26th, which was a pivotal moment for the project. On that day, over 21 million \$AXS were released, which represents approximately 8% of the capped supply. This significant release of tokens had a significant impact on the overall circulating supply, as it increased by roughly 15% overnight.

This unlock event was a significant milestone for the project, as it marked the beginning of a new phase for the Axie Infinity ecosystem. The release of these tokens allowed for a wider distribution of \$AXS, which in turn, will help to further grow and strengthen the community. With a larger circulating supply, more players will have access to \$AXS, which will enhance the in-game economy and make it more active.

Furthermore, the increase in the circulating supply also has a positive effect on the liquidity of \$AXS, making it more accessible for trading and investment. Overall, the October 26th unlock event was a significant step forward for the Axie Infinity project, and it sets the stage for continued growth and development in the future.

Price action

With the downward trend in the crypto market, \$AXS inevitably followed the trend. Before and after the sizable unlock, the trading volume increased. Upon the unlock, the overall price of AXS remained relatively stable and did not deviate significantly, indicating minimal selling pressure. However, when comparing the AXS/ETH ratio, it can be observed that AXS underperformed ETH, which could indicate that there was some level of selling pressure on the token.

\$AXS Oct'22 unlocks price impact



It's worth noting that the price spike of \$AXS in November was not a result of changes in the overall supply, but rather due to an unusual occurrence on one of the centralized exchanges. Specifically, a series of erroneous orders took place, which

caused a temporary spike in the price of the token. This spike was not reflective of the true value or performance of \$AXS and the market corrected itself shortly after.

\$IMX Unlocks

General Information

Immutable X is a layer-2 scaling solution for NFTs Ethereum-based. It aims to improve the scalability and user experience of Ethereum. Also, provide APIs and developer tools that make it easy to build on it. Approximately 44,700 wallet addresses are used for \$IMX, and about 1,000 wallet addresses hold more than 10,000 \$IMX. One key note is that \$IMX operates with only multi-sig / EOA wallets to vest their tokens, holding and distributing a large amount in 3 addresses.

Token Allocation and Vesting Schedule

The entire supply of \$IMX is designed to be 2 billion, and currently, 766 million \$IMX (~42%) have been unlocked and circulating in the open market. The token was set to be released linearly from November 2021, and the last token will be released in October 2025. The tokens are distributed as the following:

- Ecosystem Development (52%) 1034.8M
- Project Development (25%) 500M
- Private Sales (14%) 285.2M
- Public Sales (5%) 100M
- Foundation Reserves (4%) 80M

The public sale pricing was set to be \$0.1~0.16, and the private sale pricing at \$0.1.

As mentioned earlier, the token vesting and distribution were mainly from these 3 addresses:

Foundation Treasury: Unlocked

<https://etherscan.io/address/0x971f723194796dbf04dcfe361ed584cae9bf94a0>

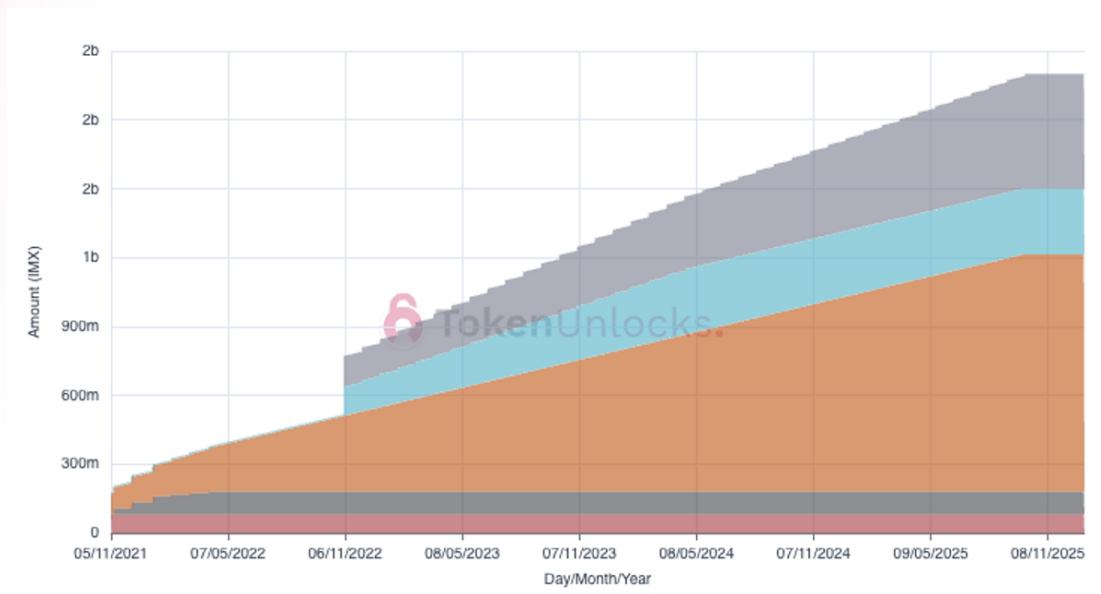
Foundation Treasury: Locked

<https://etherscan.io/address/0x237343C10705ae7605850977503E25a8C12851e6>

Immutable: Project Development Treasury

<https://etherscan.io/address/0x9cCC2CfC1dA5c2623b9ad74DCF01765eae273539>

The following graph depicts the vesting schedule. [\\$IMX Dashboard](#)



Notable Unlock

Beginning in November 2022, tokens allocated for project development and private sales have been gradually released on a monthly basis. On November 5th, 2022, a significant portion of the total token supply, approximately 12%, became available. This resulted in an overall increase in the total supply of nearly 50%. This release schedule will continue until October 2025, with tokens being distributed to rightful owners and made available on the open market on both a daily and monthly basis.

Price action

Following a significant token unlock, there was a peak in trading volume. Despite this, trading volume remained higher than average. In the two weeks following the unlock, the token experienced a decline in value of up to 50% in terms of the US dollar and 20% in terms of ETH. This drop in value was likely due to increased selling pressure on the token, as the overall price dropped from \$0.7 to around \$0.6. Additionally, the token's performance compared to ETH during this period was weaker, as evidenced by the decline in the IMX/ETH ratio before the token's price dropped again on November 8th.

\$IMX Nov'22 unlocks price impact



The co-founder of Immutable, Robbie Ferguson, has expressed his belief that the long-term decline of the \$IMX token is unlikely to happen. In a statement on Twitter, he noted that more than half of the unlocked tokens will be relocked for at least one year, which would help to mitigate the potential for selling pressure. Furthermore, he stated that institutional investors are lined up to absorb any selling pressure that may occur, further adding to the confidence in the long-term prospects of \$IMX. These statements suggest that the team behind the project and the potential investors see a potential for growth in the project and are willing to hold onto their tokens for the long term.

Future Outlook

In this annual report, we have delved into a variety of aspects surrounding Token Unlocks, including its fundamental concepts, a retrospective of the year 2022, implementation of vesting by different projects, analysis of token allocation, examination of tokenomics changes, and an in-depth examination of four major projects with unlocks. As we conclude this report, it is important to also consider what the future holds. In this section, we provide an overview of the future outlook for high-value unlocks, including statistics on the projected distribution of token unlocks among the top 300 crypto projects, using remaining market capitalization and FDV to infer.

We analyze the top 300 market cap token from CoinGecko, to understand what will potentially the unlock value be in the upcoming years. Noted that for simplicity, we excluded the token with unlimited supply in this study.

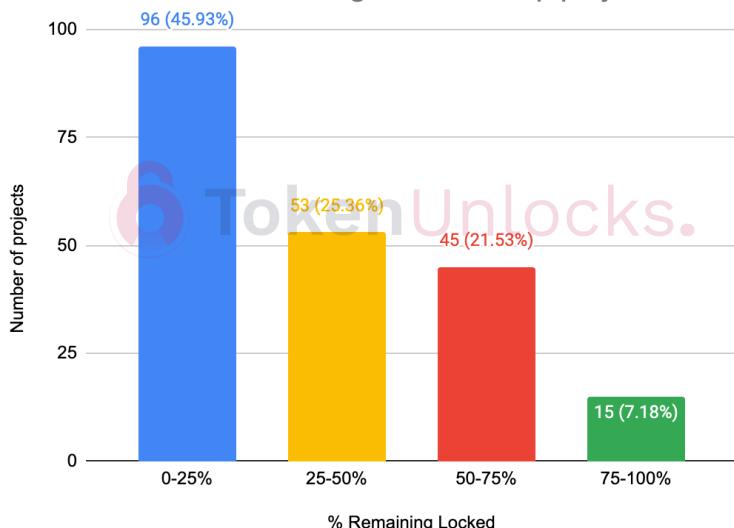
31st December 2022 stats for 300 top tokens (fixed supply)

Fully Diluted Value	\$570.8B
Market Cap	\$468.7B
Market Cap / FDV	82.1%
\$ Remaining Locked	\$102.1B

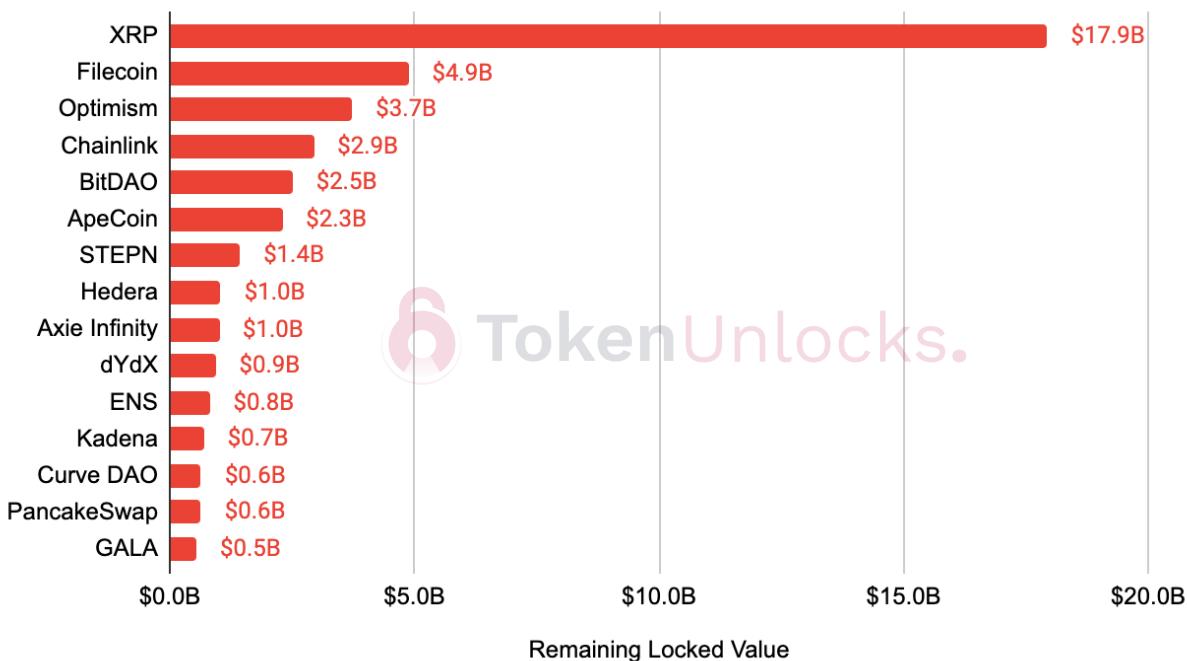
Overall, 82.1% of tokens with fixed total supply already circulated in the market, however, the value deemed to be unlocked in the upcoming years is as high as \$102B (this value are the unlocks in many years to come)

Next, study their percentages of remaining locked left (to be circulated to the market in the future). The bar chart below shows that 96 projects have remaining locked less than 25% of their total supply, while there are 15 projects that contain more than 75% illiquid tokens. On average, a project has 38.6% of the total supply to be unlocked. Finally, we list the top 15 projects with the highest estimated remaining locked value, \$XRP being the top with a whopping \$18B worth of tokens

How much is the remaining locked for top projects.



Top 15 projects with highest remaining locked value in life time (\$)



As we look forward to the year 2023, it surely is going to be an interesting one as many projects that raised funds in 2021 may need to survive by cashing out their vested tokens for operations. With most of the users gone, revenue generated from protocols is expected to plummet. However, it is not the case for our TokenUnlocks team. We will remain dedicated to making the crypto industry more transparent by providing a deeper understanding of how each project's token is allocating and incentivizing its participants through tokenomics and protocol design. We are committed to promoting transparency and ensuring that everyone can move forward with confidence. We would like to extend our gratitude to our users and team for their continued support in shaping TokenUnlocks and contributing to a better, more transparent crypto industry.

Thank you sincerely for taking the time reading this report.

TokenUnlocks team

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