TOKEN ECONOMY WHITEPAPER

Zizou

VERSION	DATE	TOKEN
Draft 0.14	2026-May-15	ZYZ

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CONTENTS

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PART ONE

PROJECT INTRODUCTION

What the Zizou project does, what problems it tries to solve and what is the project's market potential.

ATTENTION

Everything in this document contains fictitious information and should **not be treated as reference to any project team**. The document serves as an example of the work provided by FinDaS Ltd and does not constitute investment or legal advice. We recommend that nothing from this document be used verbatim for any project.

1.1 · BUSINESS MODEL

Business Model

The Zizou platform is an investment platform, which enables the pooling of funds for investment in digital and RWA assets. Additionally, the project creates liquid pairs between RWA and major crypto currencies, becoming a liquidity service vendor for projects tokenizing RWA. The project will launch on Solana and will later expand to Ethereum, Avalanche and their L2 solutions.

Zizou offers two distinct kinds of pools - managed and decentralized. Managed pools have a "funds manager", which can be a single person/entity or a group controlling the funds via multisig. Managed pools have higher fees, but are managed by high reputation professionals executing complex strategies. They will be predominantly focused on investing in starting projects or high value assets. Decentralized pools on the other hand are managed by the community contributing funds. Upon providing liquidity to the investment pool, users receive synthetic position tokens, which represent their claim on funds. These derivative tokens can be used in governance voting over the pool's investment strategy. End users can invest in the following pools:

- VC pool - a pool of funds seeking to invest in ultra early stage projects. This is a managed pool. It does not support periodic pay outs.
- Metaverse fund - a decentralized pool dedicated to metaverse investments in various items - wearables, land, characters.
- Art fund - a managed fund investing in digital art. The fund manager can employ advanced strategies as fractionalization, leverage and staking of art.
- Large cap crypto - a fund dedicated to investing in diversified L1 and "blue chip" tokens, granting users exposure to a basket of assets from the same class.

The platform will also focus on an underserved area of DeFi - liquidity pools for RWA. Although a core promise of RWA was to provide liquidity to illiquid assets, this has not happened broadly and with the expected depth and trade volume. Zizou will attempt to fix it via its proprietary pools, supported by price oracles. The pools peg RWA to one of two types of assets only - either Zizou's own ZYZ token or a shortlist of approved stablecoins (USDT, USDC, DAI).

The Zizou platform will not be fully decentralized, but it will have a fully fledged governance module tasked with independent oversight of decentralized investment pools, risk management and integrations and improvements pertaining solely to pool technology.

1.2 · ADDRESSABLE MARKET

Market Potential

The total addressable market for Zizou spans three connected industry segments: global asset and wealth management, alternative investments, and portfolio management software. The platform functions as pooled-investment infrastructure for diversified portfolios and as liquidity infrastructure for assets that require structured pricing, custody coordination, and secondary trading support. Its economic domain is the operating layer where capital aggregation, portfolio administration, investor access, and liquidity provisioning converge across retail users, professional managers, and business customers originating real-world asset products.

At the industry level, PwC estimated global assets under management at USD 139 trillion in 2024 and forecasts USD 200 trillion by 2030 at a 6.2% CAGR. Within alternatives, Preqin forecasts global alternatives AUM to rise from USD 16.8 trillion at the end of 2023 to USD 29.2 trillion by 2029, implying 9.7% annualized growth over the 2023–2029 forecast period. On the software side, Grand View Research estimated the portfolio management software market at USD 3.73 billion in 2025 and forecasts USD 8.32 billion by 2033 at an 11.3% CAGR. Grand View Research also estimated the wealth management software market at USD 6.28 billion in 2025 and projects USD 18.77 billion by 2033 at a 14.7% CAGR.

Market expansion is tied to the retailization of private markets and to operating models that support higher transaction volumes, more frequent valuation and reporting cycles, and periodic liquidity for semi-liquid holdings; Deloitte projects US retail allocations to private capital to rise from USD 80 billion to USD 2.4 trillion by 2030. Software demand is rising in parallel as asset managers digitize advisory and portfolio workflows, with AI, automation, and advanced analytics functioning as core adoption drivers in wealth management software.

Zizou participates in this industry structure as an investment-platform layer that combines managed pools, community-directed pools, and liquidity pools for real-world assets. Managed pools package professional strategy execution for higher-complexity exposures such as ultra-early-stage projects and digital art, while decentralized pools distribute basket exposure and governance-linked synthetic position tokens to contributing users. The platform also serves tokenization projects that require paired liquidity against approved settlement assets, placing the product inside the transaction, portfolio, and secondary-liquidity workflow rather than inside a single asset silo. Initial deployment on Solana, followed by expansion to Ethereum, Avalanche, and associated L2 environments, extends distribution across investor and issuer segments while preserving the same core commercial function: pooled investment access, portfolio participation, and liquidity servicing for digital and real-world asset markets.

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PART TWO

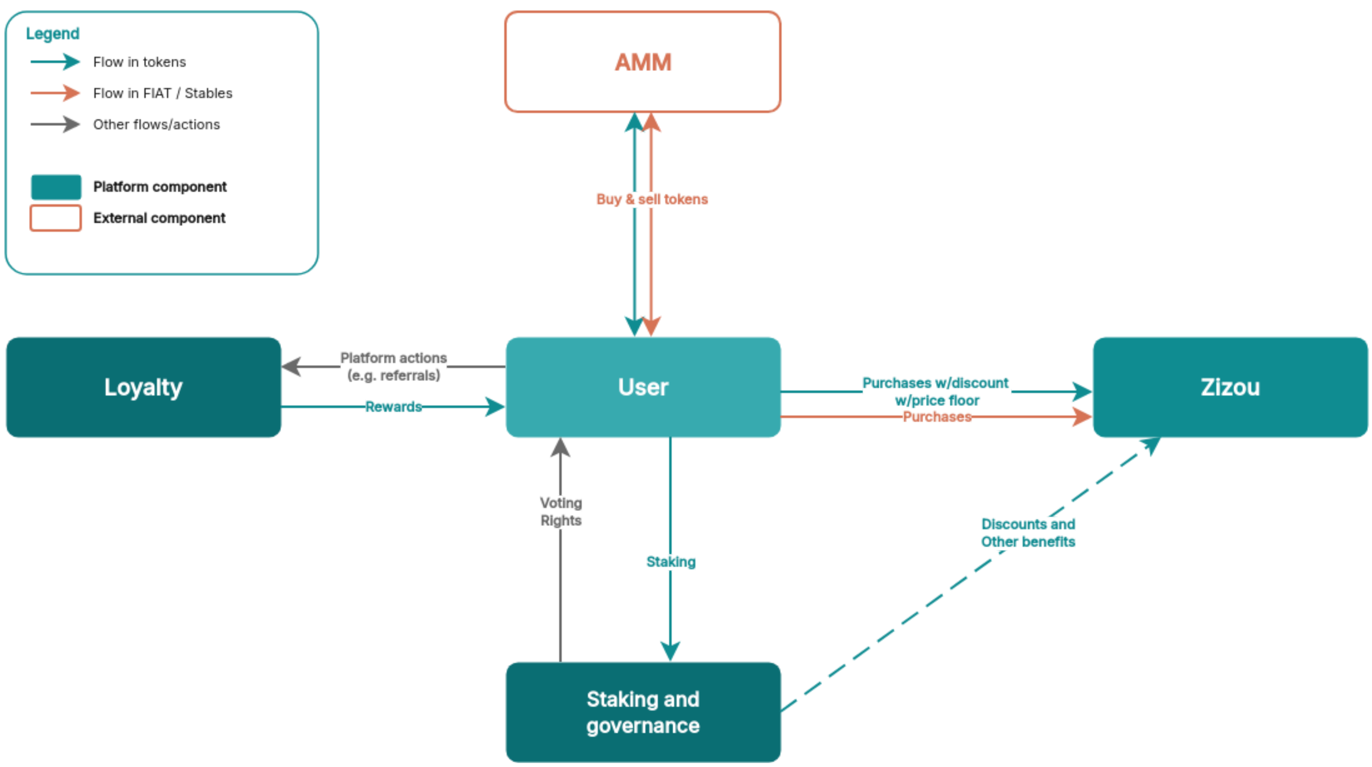
TOKENOMICS & DISTRIBUTION

Monetary policy, fiscal levers, and the rules that govern ZYZ supply, demand, and behaviour across the Zizou ecosystem.

Token Policy Framework

ZYZ uses a fixed supply model meaning no new tokens will be minted after the token generation event. The token functions as payment on the platform and grants governance rights under certain conditions. A high-level list of token functions includes:

- Soft price floor
- B2B staking for benefits
- B2C staking for benefits
- Loyalty program
- Governance
- Rewards for:
  - Loyalty
  - Liquidity provision to ZYZ



KEY · PARAMETERS · AT · A · GLANCE

- **Listing price**: $0.021
- **Rewards emissions**: 1.2% of remaining pool per 30 day epoch
- **Soft price floor**: $0.0105
- **Buybacks**: 20.0% of Revenue

Payment

ZYZ functions as a payment token on the platform. Users of Zizou can also pay in major cryptocurrencies, stablecoins and fiat.

Price floor

The platform applies a token price floor to token-denominated payments. When the market price falls below that floor, the platform still accepts ZYZ on a fixed price basis, and the resulting payment value creates an effective discount for platform users.

Loyalty system

The platform runs a continuous loyalty program that records points from overall platform contribution. Point balances accumulate within Epochs, which last 30 days each. At the end of an Epoch, participants receive a share of the token reward in proportion to the points accumulated during that Epoch. Larger point balances therefore receive a larger share of the Epoch's token rewards. Here is a list of initial actions that will receive points:

- Managed pool capital allocation - Points awarded for each qualifying net new capital deposit into a managed investment pool.
- Decentralized pool capital allocation - Points awarded for each qualifying net new capital deposit into a decentralized investment pool.
- Active pool position - Points awarded for maintaining an open funded position in an eligible investment pool during the Epoch.
- Decentralized pool strategy vote - Points awarded for each valid vote cast with synthetic position tokens on decentralized pool investment strategy decisions.
- Platform governance vote - Points awarded for each valid vote cast with staked ZYZ on non-urgent platform governance matters when the governance process is active.
- ZYZ liquidity provision - Points awarded for maintaining eligible liquidity in platform-supported ZYZ pairs.

The exact points per action can be found in the Implementation Details section, subsection Loyalty. The set of actions and their respective points may change at the project's discretion as the system evolves and prioritizes new products and services.

B2B Stake

Business-user benefits are tiered by staked tokens and are available immediately after the tokens are locked. A larger staked-token balance qualifies the business user for a higher benefit tier. Unlocking happens after a 30 day cooldown period, during which the benefits are still in effect.

Level	Amount	Benefits
1	**30,000** ≈ $630	5.0% fee discount
2	**45,000** ≈ $945	7.5% fee discount
3	**70,000** ≈ $1,470	10.0% fee discount; free performance dashboard
4	**150,000** ≈ $3,150	12.5% fee discount; free performance dashboard

The tiers depend solely on the number of tokens staked. Since the tiers are based on tokens, if the token price drops, higher tiers become more accessible. However if the token price increases, those tiers would be harder to achieve.

The numbers above are provisional and might need to be adjusted once the project goes live and there is data on actual user behavior and the market-determined token price. The platform also reserves the right to cap the net value of the maximum benefits at each level.

B2C Stake

Similar to B2B Staking, here user benefits are also tiered by staked tokens. A larger staked-token balance qualifies the user for a higher benefit tier.

Level	Amount	Benefits
1	**1,500** ≈ $32	5.0% fee discount
2	**3,000** ≈ $63	7.5% fee discount; free monthly consultation
3	**5,500** ≈ $116	10.0% fee discount; early access to pools
4	**9,500** ≈ $200	15.0% fee discount; VIP event invite; whitelisting

The tiers depend solely on the number of tokens staked. Since the tiers are based on tokens, if the token price drops, higher tiers become more accessible. However if the token price increases, those tiers would be harder to achieve.

The numbers above are provisional and might need to be adjusted once the project goes live and there is data on actual user behavior and the market-determined token price. The platform also reserves the right to cap the net value of the maximum benefits at each level.

Buybacks

20.0% of platform revenue is used to buy back ZYZ from the market. The purchased tokens are redistributed to the reward pool. Buybacks pause when the token meets a project-defined "success threshold" price. The threshold is initially set at 3× the starting liquidity-pool price and is adjusted as market conditions evolve. Because the threshold is an internal procedural rule rather than a smart-contract parameter, adjusting it requires no contract upgrade or multisig action, only internal approval. This deliberately keeps the lever flexible: rigid on-chain rules around buybacks have historically created exploitable patterns.

> **WHY · MANUAL**
>
> Fully automated buyback rules are predictable, and predictability is exploitable. Sophisticated actors can model deterministic responses to price movements and position capital to extract value from those reactions. Keeping deployment manual preserves the economic intent of the policy while reducing strategic-manipulation surface.

Overflow

Overflow occurs when the reward pool becomes sufficiently full. In that state, the tokens are rerouted to liquidity provisioning instead of the reward pool.

Incentives

The Incentives module distributes rewards in Epochs - these are recurring reward periods. Each Epoch allocates a percentage of the tokens **remaining** in the fixed reward pool, rather than a fixed token amount. This structure defines three system properties:

- The reward pool is non-depleting under the Epoch allocation rule.
- Epoch reward output declines over time because each distribution is calculated from the remaining pool balance.
- The mechanism remains compatible with a fixed-supply token because rewards are restricted to a preallocated pool and do not require uncapped issuance.

Reward eligibility is limited to the actions recorded by the platform incentive logic:

- providing liquidity for ZYZ
- participation in the loyalty program

The reward pool also receives purchased ZYZ through the buyback flow described above. A percentage of platform revenue is used to buy back ZYZ from the market. The purchased tokens return to the reward pool and become part of the balance from which subsequent Epoch allocations are calculated.

Funding Strategy

Token Sale Summary	
Soft Cap	1.00 MM USD
Hard Cap	2.50 MM USD
Sale Tokens	205.00 MM
Sale allocation	20.50%
Remaining tokens post-sale	Deposited to reserves

TOKEN SALE SETUP					
STAGE	PRICE (USD)	TOKENS	% TOTAL	RAISE (USD)	FDV (USD)
Seed	0.010	100.00 MM	10.00%	1.00 MM	10.00 MM
Private	0.012	75.00 MM	7.50%	0.90 MM	12.00 MM
Public	0.020	30.00 MM	3.00%	0.60 MM	20.00 MM
Total		**205.00 MM**	**20.50%**	**2.50 MM**	

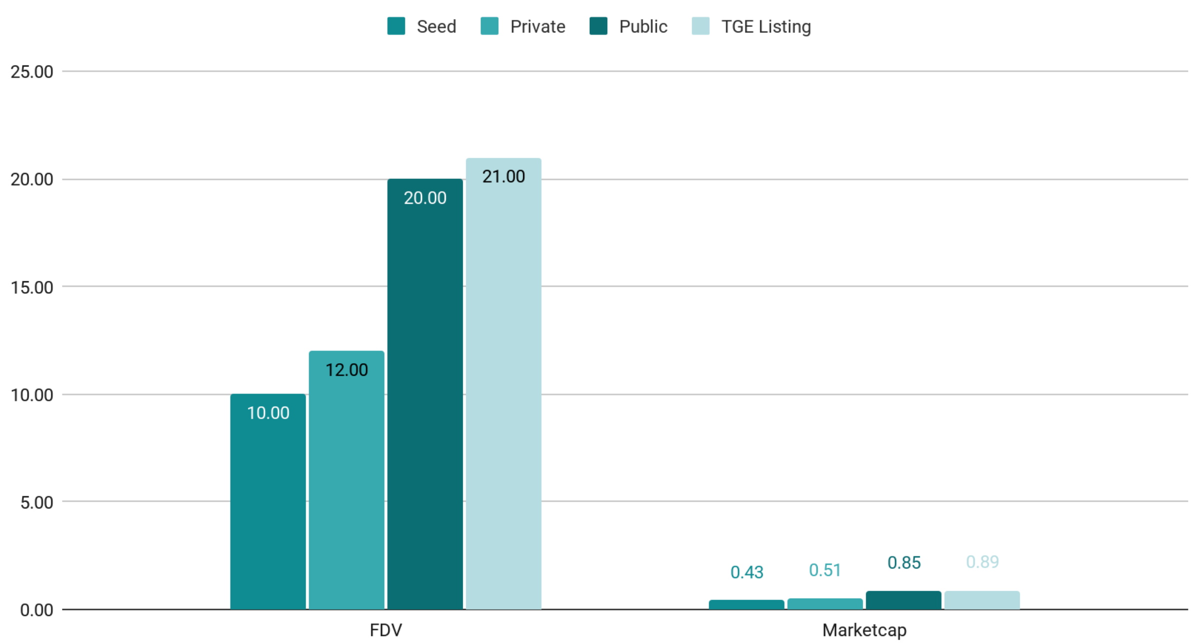


***FIGURE 1** · Implied FDV & Market Capitalisation based on different sale stages*

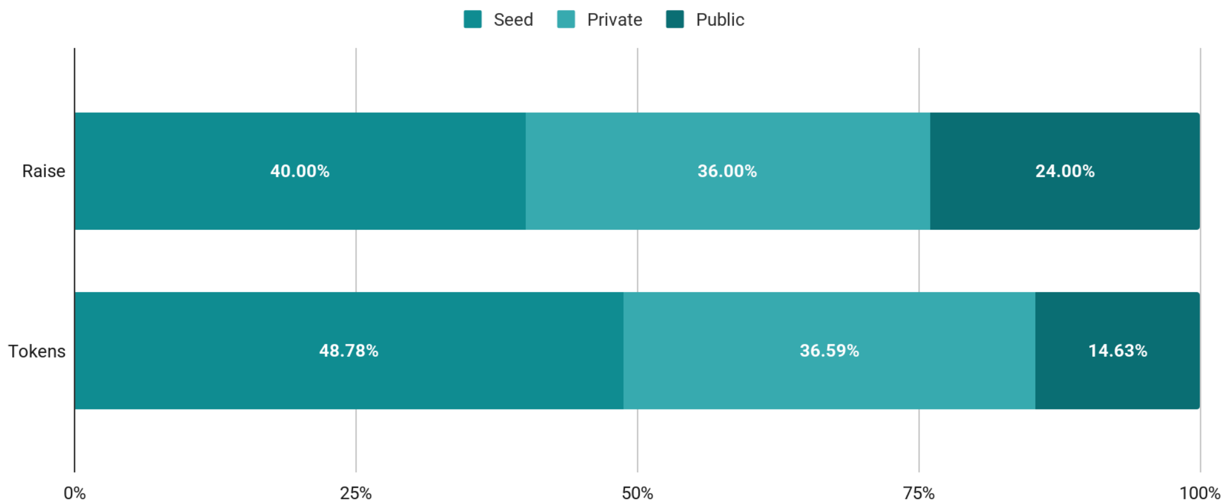


FIGURE 2 · *Relative contribution / tokens for each round of the token sale*

Distribution Plan

Vesting schedule, per token allocation							
Stage	Allocation	Tokens (MM)	TGE Release	TGE Unlock/Total	Cliff	Vesting	Monthly Release
Seed	10.0%	100.00	0.00%	0.00%	12	24	4.2%
Private	7.5%	75.00	0.00%	0.00%	12	18	5.6%
Public	3.0%	30.00	0.00%	0.00%		3	33.3%
Marketing	10.0%	100.00	5.00%	0.50%		36	2.6%
Team	10.0%	100.00	0.00%	0.00%	12	36	2.8%
Advisors	3.0%	30.00	0.00%	0.00%	12	36	2.8%
Foundation	3.0%	30.00	0.00%	0.00%		12	8.3%
Community pool	30.0%	300.00	0.00%	0.00%			Non-linear
Liquidity	7.5%	75.00	50.00%	3.75%		12	4.2%
Reserve	16.0%	160.00	0.00%	0.00%		36	2.8%
Total	**100.0%**	**1,000.0**		**4.3%**			

INITIAL SUPPLY

42.5M

4.25% of supply

FDV AT LAUNCH

$21M

$0.021 listing price

MARKET CAP

$0.89M

$0.11M excluding liquidity

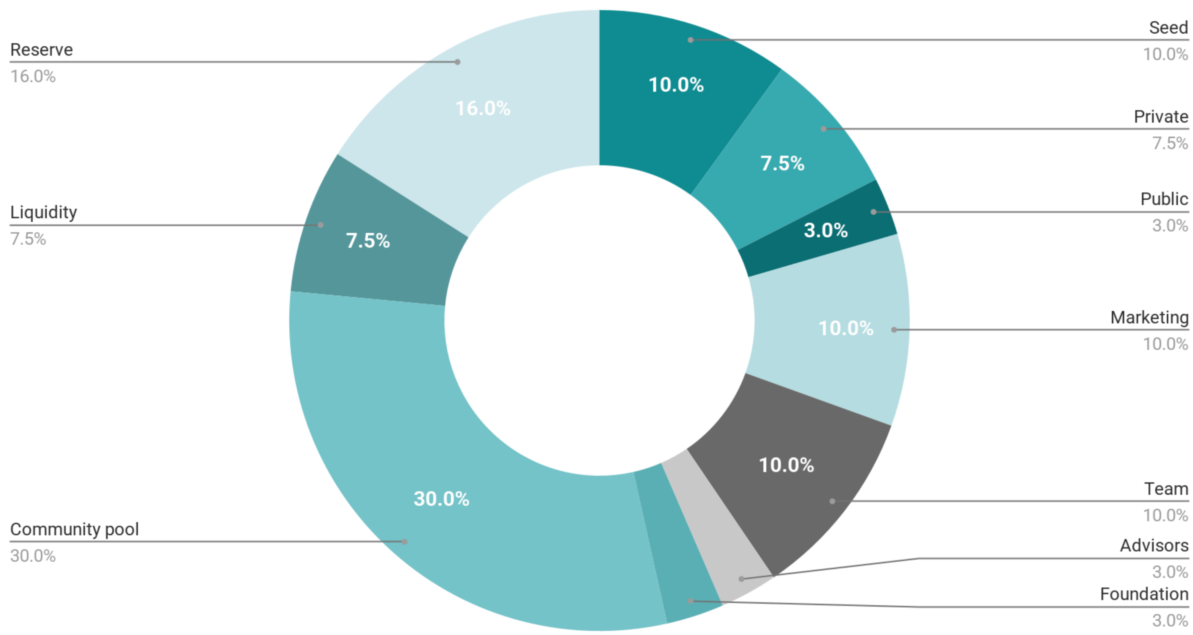


FIGURE 3 · *Total token allocation percentages*

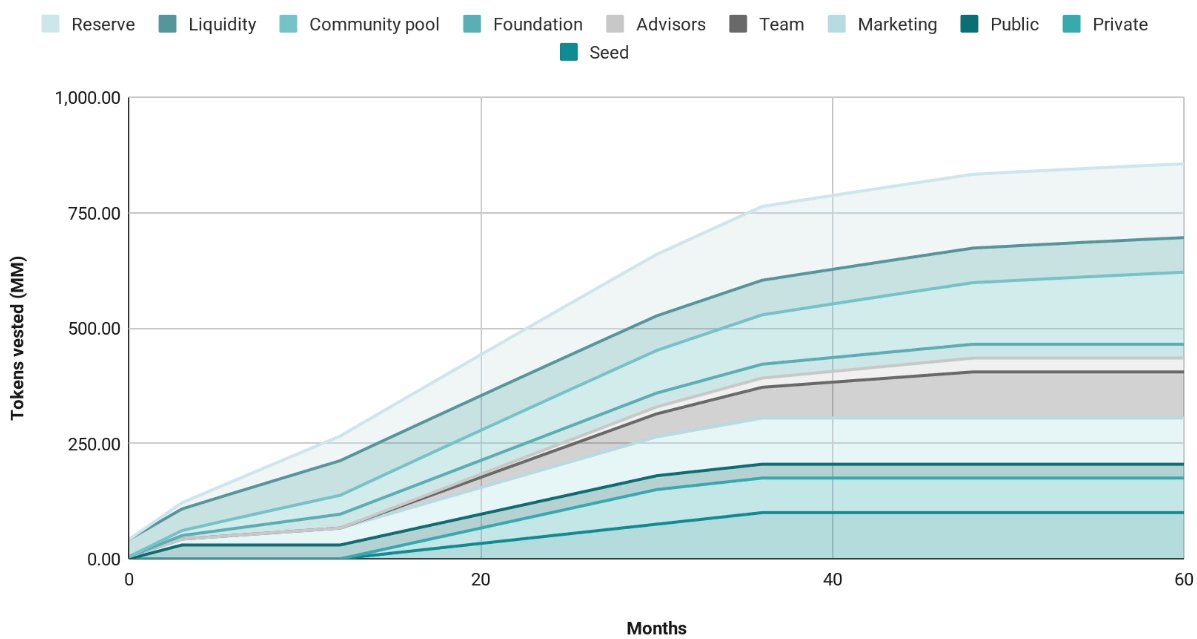


FIGURE 4 · *Token vesting schedule*

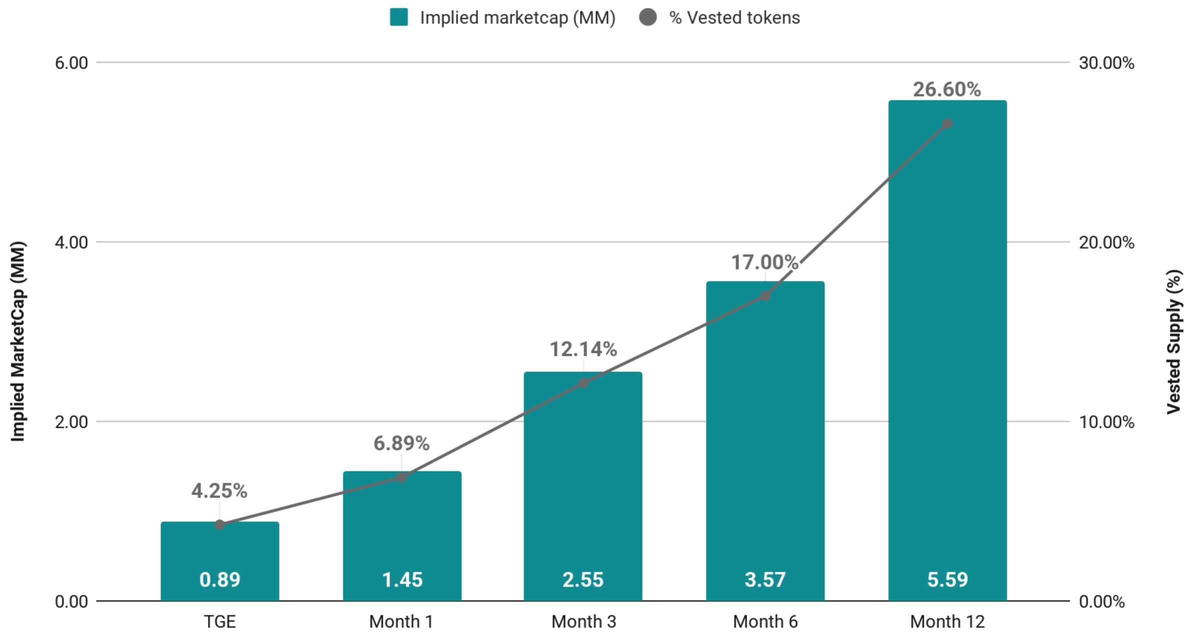


FIGURE 5 · *% Vested Tokens during the first year and implied market capitalisation based on Vested Tokens and Listing Price*

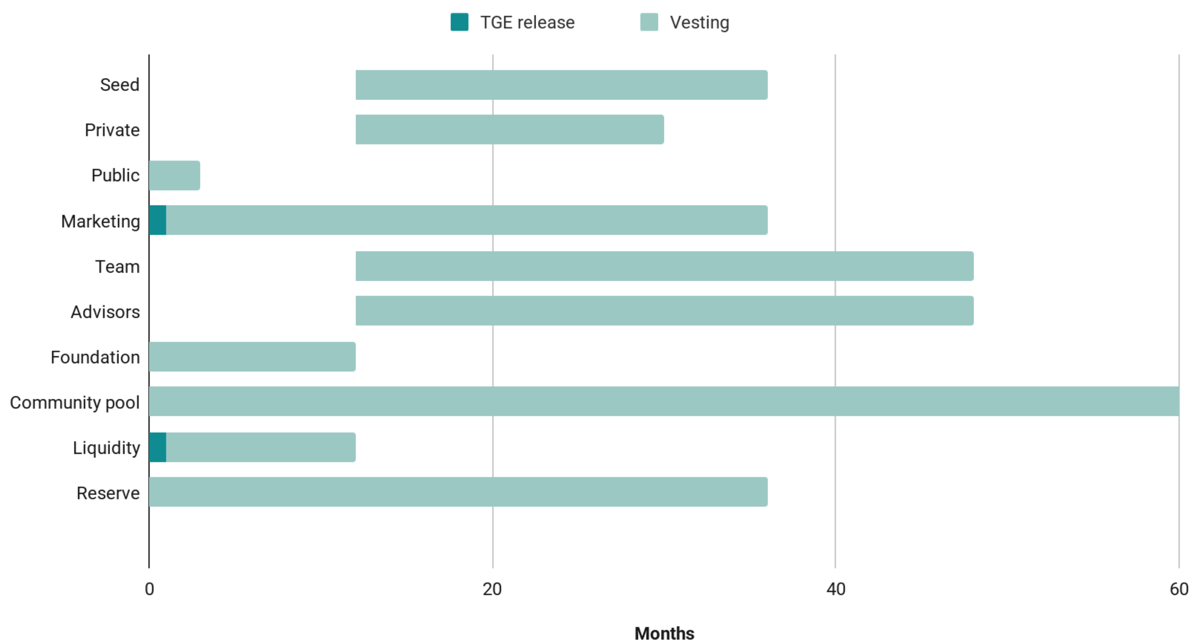


FIGURE 6 · *Token Release and vesting schedule*

2.4 · PROJECT MANAGEMENT

Governance

Zizou governance uses a two-stage decentralization structure split into Early Days and full decentralization. In the Early Days stage, the team holds full control of the project and governance voting does not operate. In the full decentralization stage, the team relinquishes control and direct hotfix authority; all decisions use community input through a forum or off-chain voting. A select Council has the prerogative to push through emergency hot fixes via multisig.

Governance participation is based on staking the ZYZ token. Voting will be done via vote escrowed (ve) tokens. VE tokens were first pioneered by Curve. In a nutshell, ve tokens are locked for a very long duration, granting a huge increase in voting power to the person locking the tokens. Voting rights apply only when the governance process is active, which occurs during the Semi-decentralization stage for non-urgent matters. Token holders who do not stake ZYZ do not participate in that voting flow. Additionally, to avoid system centralization and collusion, the voting will be done via quadratic voting. This means that the final voting power (VP) that a user has grows slower and slower the more tokens (T) they have. More formally:

$$VP = \sqrt{T \times M}$$

M is the duration based multiplier.

Proposals for non-urgent matters enter the governance process through the community forum and on-chain vote. Votes are collected from participants whose governance rights derive from staked ZYZ, and the recorded result functions as community input for the decision process. Urgent fixes, bug responses, and related hotfix actions bypass voting.

During the final phase of decentralisation the platform’s governance rules will be structured on the market best practices for governance.

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PART THREE

IMPLEMENTATION DETAILS

Specific formulas and principles on how monetary & fiscal policies are designed for the ZYZ token.

Soft Price Floor

Soft price floor is a mechanism which works in tandem with the dynamic pricing, as explained earlier in this document. Essentially - dynamic pricing means that the number of tokens charged is adjusted based on the token price. So if the token price drops, more tokens are charged. A soft price floor is limited in this increase. Essentially if the token price drops below a specified threshold, there is no further increase in the number of tokens charged, which effectively is equivalent to providing an additional discount.

Let's illustrate how the price floor works with a practical example:

1. A client needs to pay 100 USD. At a current token price of 0.021 USD per token, this translates into 4,762 tokens.
2. If the token price drops to 0.0105 USD per token, this would mean 9,524 tokens.
3. Even if the token price drops further below this price point, the token amount needed to pay remains constant at 9,524 tokens. This also means that the services are now offered at a discount to their USD token price! A further 30% decrease in the token price (for example) translates into a 30% discount for the people who choose to pay in the token.
4. The above is equivalent to a token price floor of 0.0105 USD per token

ATTENTION

The token price floor is adjustable and should be re-assessed periodically based on market conditions.

FIGURE 7 · The effective token cost for a 100 USD transaction, at different token price levels, including a Price Floor set at 0.0105 USD per token

WHY · IT · WORKS

The mechanism creates a buying anchor at the floor price: users who hold ZYZ at floor prices benefit from a structural call option on the dollar-value of their subscription. This drives accumulation behaviour during drawdowns - exactly the demand the token economy needs to stabilise. The cost to the protocol is bounded by the discount cap and self-corrects as price recovers above the floor.

3.2 · IMPLEMENTATION · LOYALTY

Loyalty

The Zizou Loyalty system is inspired by successful Airdrops such as Blur and HOP protocol, where complex distribution criteria were used, in order to ensure that only loyal platform users get rewarded rather than "Airdrop tourists" who only chance the current airdrops without any actual contribution to the platform.

The way the system works is as follows:

- People get assigned points based on their platform participation
- The sum of the points from the different categories from the users participation weight (C_x)
- At the end of every epoch*, users **can claim** a small reward allocation from the Community pool allocation based on their participation weight (C_x).

To define this more formally:

$$C_{x,p} = \sum_{i=1}^{n} L_n + \frac{C_{x,p-1}}{2}$$

Where:

- $C_{x,p}$ is the participation weight for person X for epoch p
- $C_{x,p-1}$ is the participation weight for person X from the previous epoch (p-1)
- The sum of L_n represents the sum of points in each of the individual categories (as further explained below)

∗An epoch is a reward distribution period, with a duration of 30 *days.*

In other words, the user's contribution is the sum of points for the current epoch plus half of the points from the previous epoch. This is done in order to both incentivise users to be continuously active as well as not to force users to “pace” their contributions. Let’s illustrate this with a simple example:

- User A has earned 100 points yesterday and 250 points today
- User A had 500 points in the previous epoch
- The participation weight (C_x) of the user is as follows:
    - 500/2 + 100 = 350 for yesterday
    - 500/2 + 100 + 250 = 600 for today
- If the user earns no extra points this epoch, this starting participation weight for the next epoch will be: 600 / 2 = 300

ELIGIBILITY

In order for a user to be eligible for rewards disтрbutions, they should have earned at least 1 point over the last two epochs. If not, their contribution weight is reset to 0.

Points are distributed based on the following actions:

- Managed pool capital allocation - 40 points for every 100 USD (max 1,000 points per epoch). Points are awarded for each qualifying net **new** capital deposit into a managed investment pool.
- Decentralized pool capital allocation - 30 points for every 100 USD (max 1,800 points per epoch). Points are awarded for each qualifying net new capital deposit into a decentralized investment pool.
- Active pool position - 2 points per day for every 100 USD (max 500 points per epoch) - Points awarded for maintaining an open funded position in an eligible investment pool during the epoch.
- Decentralized pool strategy vote - 15 points (90 points per epoch) - Points awarded for each valid vote cast with synthetic position tokens on decentralized pool investment strategy decisions.
- Platform governance vote - 20 points (120 points per epoch) - Points awarded for each valid vote cast with staked ZYZ on platform governance matters when the governance process is active.
- ZYZ liquidity provision - 4 points per day for every 100 USD of liquidity (max 500 points per epoch). Points are awarded for maintaining eligible liquidity in platform-supported ZYZ pairs.

Once the platform is live those points might need to be adjusted based on the platform activity and the token price. Please note that loyalty rewards might constitute a taxable event in certain jurisdictions. Users are advised to consult local tax law before claiming rewards in order to avoid edge case scenarios, where taxes might be due prior to the tokens received being liquid.

Incentives

The Zizou project will incentivize users via its Community pool allocation. This variable supply pool will enable users to claim rewards over each reward distribution period (called an epoch). Each epoch has a duration of 30 days. The reward for each epoch is equal to 1.20% of the outstanding tokens in the Community pool, at the start of the current epoch.

The 1.20% number is picked as targeting an annual inflation rate comparable to the tokens being released from other allocations (thus rewards are broadly tracking the overall release of tokens into circulation). This translates into an annual inflation rate (relative to the overall token allocation) of around 4.10% in the first year and gradually reducing it from there on. This gives the pool a half-life (the time it takes for 50% of the remaining tokens in the pool to be depleted) of 57 epochs or around 4.7 years. Let's illustrate this with an example using actual numbers:

1. The pool starts with 300,000,000 tokens
2. The Epoch reward is set at 1.20% of the pool's tokens. The epoch duration is 30 days, so on day 30, 3,600,000 tokens have been assigned.
3. Epoch two starts. The tokens in the pool are now 296,400,000. The Epoch reward is still 1.20%. This works out to 3,556,800 tokens for epoch 2.

The above setup means that the Community pool allocation can never be depleted since the rewards are always distributed as a percentage of the outstanding tokens in the pool. This rewards mechanism provides capped inflation and is compatible with fixed supply tokens (as opposed to perpetual inflation).

Reward caps: in order to avoid extreme scenarios where a small number of users receive a large number of tokens, due to slow early adoption, we recommend the implementation of reward caps for individual users. For non-yield bearing actions (Loyalty), an example implementation of this would be a setup where a single user cannot earn more than 1/1000th of the rewards for the particular action within the epoch. For yield bearing actions (Liquidity (APY),Staking (APY)), we recommend a yield cap in the 60-100% range. Those numbers need to be fine-tuned over time based on project performance and market conditions.

Reward calculation: The rewards will be assigned (and users need to **claim** them) based on the following formula:

$$P_{D\%} = \frac{U_x}{\sum_1^n U_1 ... U_n}$$

Where:

- $P_{D\%}$ is the percent of the epoch rewards that a particular user (X) gets
- U_x is the participation weight of user X for the particular epoch*
- $U_1 .. U_n$ is the sum of the participant weights for all users

DAO Setup

The following process uses a modified version of UniSwap's governance setup with voting power generation based on best practices from Curve and quadratic voting, as described in Governance.

Phase 1: Temperature Check

The purpose of the temperature check is to determine if there is sufficient will to make changes to the status quo. To create a temperature check:

1. Community member (A) asks a general, non-biased question on the community forum about a potential change (example: "Should daily LP rewards be increased to 0.02%?").
2. Voters vote on-chain to indicate their interest in bringing it forward to the next stage. Voting lasts five days or until 5% of the voting pool backs the proposal.

If the proposal gains 5% of the pool's backing, it moves to the next stage - consensus check.

Phase 2: Consensus Check

The purpose of the consensus check is to establish a formal discussion around a potential proposal. To create a Consensus Check:

1. A community member (A) uses feedback from the Temperature Check post and creates a new poll covering the options that have gained support. This poll can either be binary or multiple-choice but must include the option "Make no change" or its equivalent.
2. A community member (A) creates a new topic in the forum titled "Consensus Check - [Your Title Here]." This will alert the community that this topic has already passed the temperature check. Community moderators should immediately remove any topics beginning with "consensus check" that have not passed the temperature test.
3. A community member (A) makes sure that the discussion thread links to the:
    - Original Temperature check thread
    - Original Temperature check poll
    - The new poll for the consensus check
4. Community member (A):
    - Reaches out to their network to build support for the proposal.
    - Discusses the proposal and solicits delegates to vote on it.
    - Responds to questions on the consensus check topic.
    - Shares their viewpoint, but tries to remain as impartial as possible.

The proposal should also include an implementation standard for the suggestion:

- What companies/individuals are eligible for the implementation process
- Is a POC required

    - Does the Treasury partially or fully fund the POC?
- What is the maximum budget for the implementation?
- What are the deadlines?
    - For submitting a tender proposal
    - For the final deliverables
- What is the penalty for not delivering the project:
    - Within the deadline
    - With a sufficiently good scope

Voting lasts five days. Whichever option has the majority of votes wins and can be included in a Tender for Stage 3. A 50%+1 pool quorum of the voting pool is required for the vote to be considered valid. If the option “Make no change” wins, the Consensus Check topic should be closed by community moderators.

Phase 3: Tender

Each passed consensus check which requires code work or other large scale, non-community work, will be subject to a public tender for implementation. The tender begins after the consensus check, and applicants can submit their proposals for implementation. The parameters for the implementation contract should include:

- Required structure of the bid for the implementation submission
- Deadline
- Success criteria
- Penalty amount subsidy
- Audit process on the side of the DAO

Applicants must agree to the conditions of each point above and submit a tender in the required format. The selection process lasts as long as defined by the deadline, and at the end of the period, a vote is initiated. Applications that don’t meet one or more of the criteria are discarded before the vote. The vote lasts for five days:

- The proposals are selected and ranked in order of votes collected.
- The top proposal is the winner and becomes the “implementation party.”

The implementation party has two days to stake any penalty deposits as defined in the tender process. If the implementing party cannot provide this amount on their own, the process may be paused to allow them to raise the funds. Failure to raise the funds within a defined grace period will result in the second most voted party receiving the contract. This process continues until one of the applicants meets the above requirements. If none of the applicants satisfies the condition, then step 3 repeats all over. If step 3 fails a second time, then the whole process reverts to phase 2, where community member (A) should suggest new proposal parameters.

Phase 4: Governance Proposal

Phase 4 - Governance Proposal - is the final step of the governance process. The proposal should be based on the winning outcome from the consensus check and the tender winner and can consist of one or multiple actions, up to a maximum of 10 actions per proposal. To create a Governance Proposal:

1. The implementation party writes the code for the proposal.
2. A professional auditor should audit all proposed codes. This auditing process could be paid for or reimbursed by the community treasury (audit subsidy).

Once the proposal is active, a five-day voting period starts. Ongoing discussions can take place in the community forum. If the proposal passes successfully, a two-day timelock will follow before the proposed code is executed. If the proposal does not pass, one of two things happens:

- The community can vote on a time extension for the implementation party to re-calibrate their proposal.
- The community rejects the proposal, any penalties defined are slashed from the implementation party's deposit, and the tender process begins anew.

During the early stages of the governance module implementation, the project team will have the power to veto any proposal in the timelock that could significantly hurt the protocol. At a later stage, the team will renounce this power.

Governance Glossary

A governance token: A token that designates the weight of a user's voting rights. The more governance tokens a user has in their wallet, the more weight their delegation or vote on a proposal holds.

Delegation: Governance token holders cannot vote or create proposals until they delegate their voting rights to an address. Delegation can be given to one address at a time, including the holder's address. Note that delegation does not lock tokens; it merely adds votes to the chosen delegation address.

A Governance Proposal: A proposal is a code that is executed by the governance contract through timelock. It can replace the governance contract, transfer tokens. Proposals are stored in the "proposals" mapping of the Governance smart contract. All proposals are subject to a 5-day voting period. If the proposer does not maintain their vote weight balance throughout the voting period, the proposal may be canceled by anyone.

Quorum: For a vote to pass, at least 67% of all delegated tokens must vote in the affirmative. The purpose of this quorum is to ensure that the only measures that pass have adequate voter participation.

Voting: Users can vote for or against single proposals once they have had voting rights delegated to their address. Votes can be cast while a proposal is in the "active" state. If the majority of voters vote for a proposal, the proposal may be queued in the timelock.

Timelock: All governance actions are delayed for a minimum of 2 days by the timelock contract before they can be executed.

ATTENTION

Everything below this section contains sensitive information, which should typically **only be used as reference for the project team**. We recommend that nothing below this section is made available outside of the project team.

So what should you publish?

Everything before the Appendices is suitable to be included in a Whitepaper or as general information on the project website

The Appendices BEFORE this section are suitable to be published as part of a more technical wiki, however most projects would choose to not publish this as well (due to security through obscurity).

Security through obscurity, in this context, refers to deliberately limiting the public disclosure of certain implementation details of a token economy so that potential adversaries cannot easily model or exploit the system. Tokenomics mechanisms (such as emission schedules, liquidity defense mechanisms, market-making rules, rebalance triggers, reward distribution algorithms, or treasury operations) often contain operational parameters that can be used to predict system behavior. When these parameters are fully public and precisely specified, sophisticated actors can simulate the system and design strategies that extract value from predictable responses.

The mechanism of exploitation typically relies on predictability. If a participant knows exactly how a protocol reacts to price movements, liquidity imbalances, or staking flows, they can position capital to profit from those reactions. Examples include front-running treasury interventions, timing liquidity withdrawals before emissions unlock, exploiting deterministic reward formulas, or arbitraging price-support mechanisms. By withholding certain operational parameters or implementation details (while still disclosing the high-level economic logic) a project reduces the ability of external actors to construct accurate attack models.

The implication is that partial opacity can increase the robustness of a token system against strategic manipulation. Publishing the conceptual framework (utility, incentives, supply structure) preserves transparency for users and investors, while keeping certain technical appendices internal prevents adversaries from obtaining a precise blueprint of the system's defensive mechanisms.

04

PART FOUR

LIQUIDITY

Liquidity reserve sizing, sell-pressure distribution, and dynamic deployment between direct AMM provision and discretionary buybacks.

4.1 · LIQUIDITY PROVISIONING

Liquidity Recommendations

In order to determine the proper liquidity levels for the projects, we have run multiple scenarios for market behaviour, as described in the scenarios section of this document. Using those outcomes, we can estimate a range of the total sell pressure the token is likely to face within the first year of operations. We keep our liquidity recommendations within a single year, since predictions further into the future become more unreliable and depend on multiple changing variables. We recommend that the liquidity strategy beyond year 1 (and year 1 as well) is aligned with a dedicated market maker, responsible for ensuring the liquidity of the project.

We structure the sell pressure estimations by applying sell probability bands to the different allocations (shown below). Those probability bands are based on multiple sources such as:

- Studies on Airdrops
- Studies on Investor behaviour after ICOs
- Studies on IPO lockups
- Studies on insider behaviour post vesting
- Empirical experience from previous projects

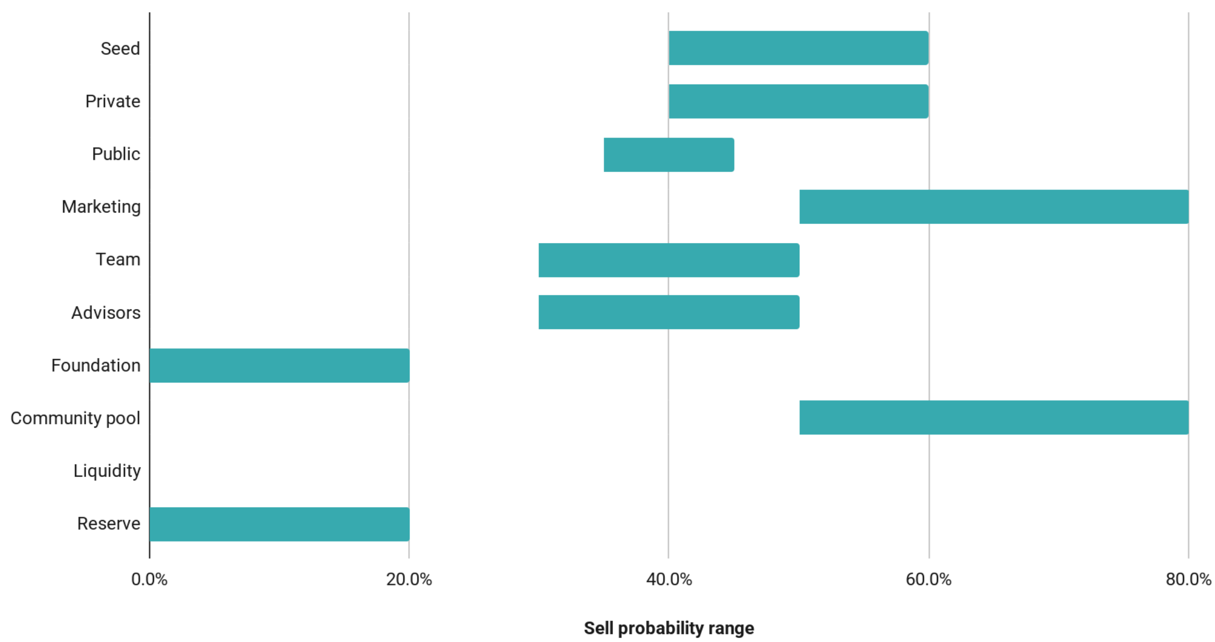

FIGURE 8 · Estimated sell probabilities across different allocations

The above ranges are just assumed outcomes based on previous experience, as such they cannot be taken as a single source of truth for the expected token sale outcomes. To remedy this, we construct a cumulative probability BETA in order to observe possible outcomes across a probability range.

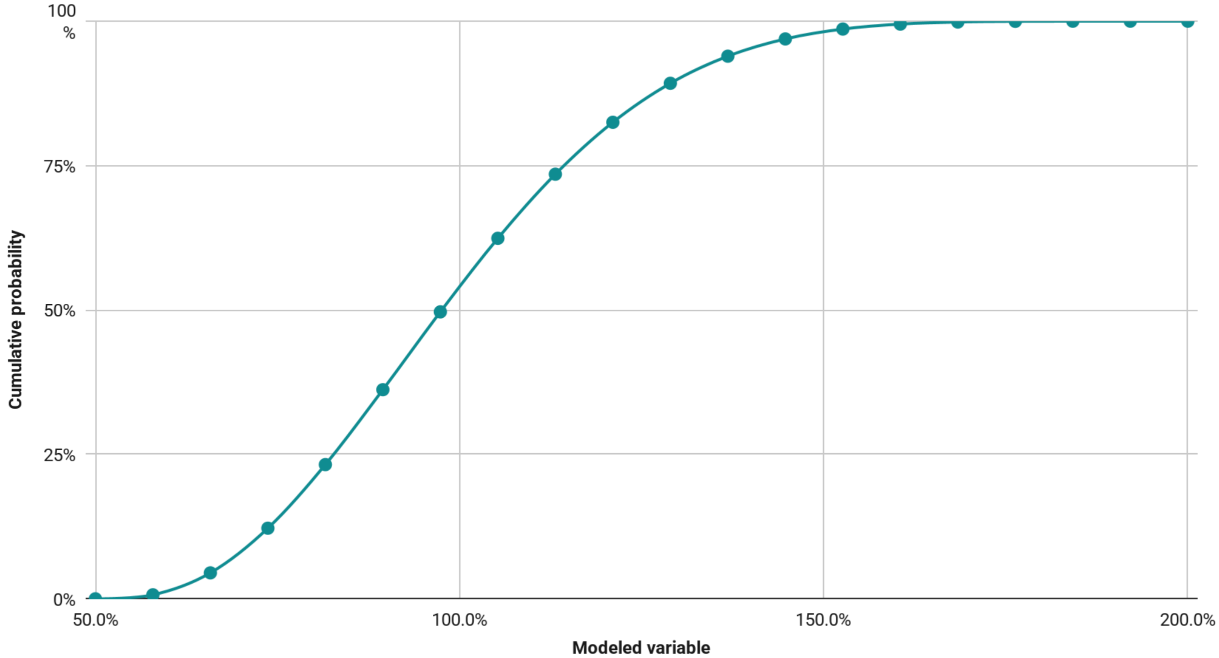

FIGURE 9 · *Cumulative probability function, modeling the expected range of variation for the sale of tokens.*

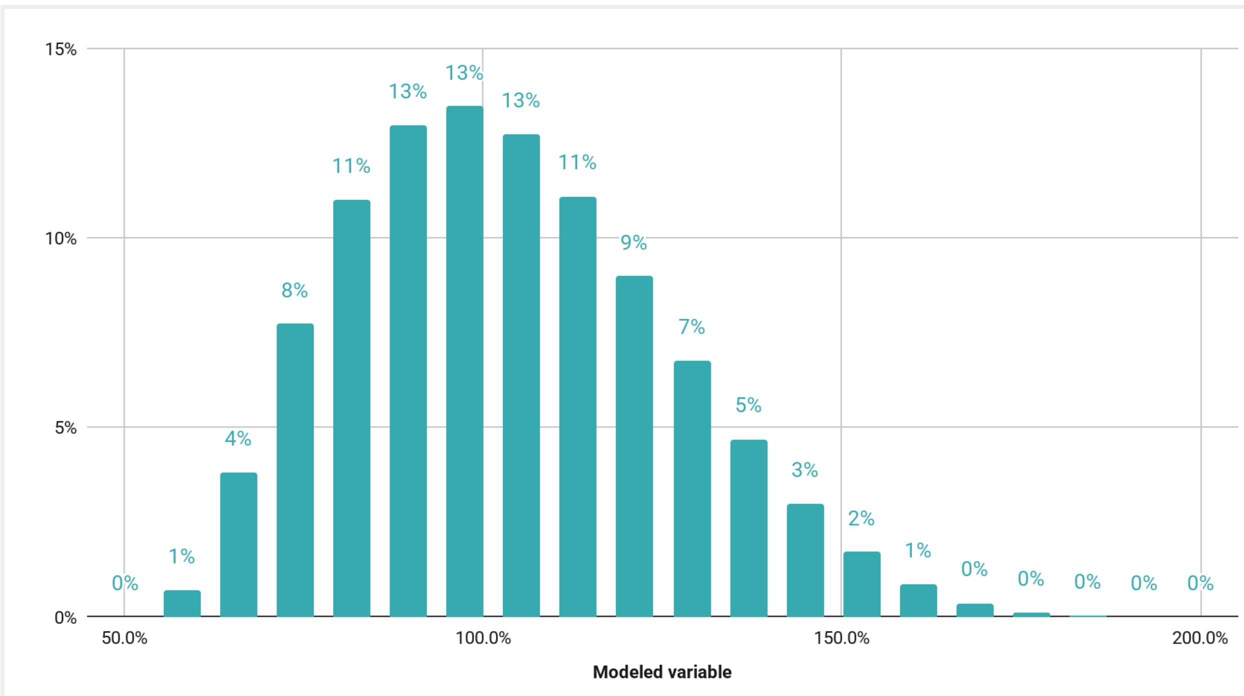

FIGURE 10 · *Discrete probability function, modeling the expected range of variation for the sale of tokens.*

We can then map this function to the expected ranges defined previously, in order to obtain a sale range probability for each allocation.

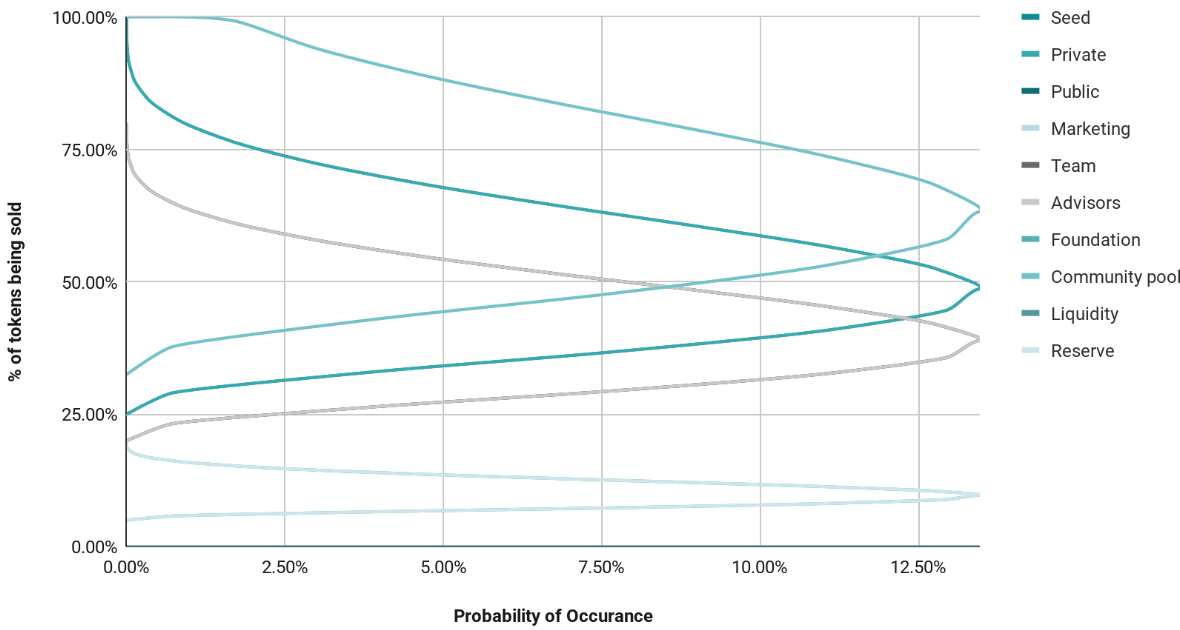

FIGURE 11 · *Allocation specific sell range probabilities.*

Combining all of the above, we can now construct a total token sell probability function for the first year.

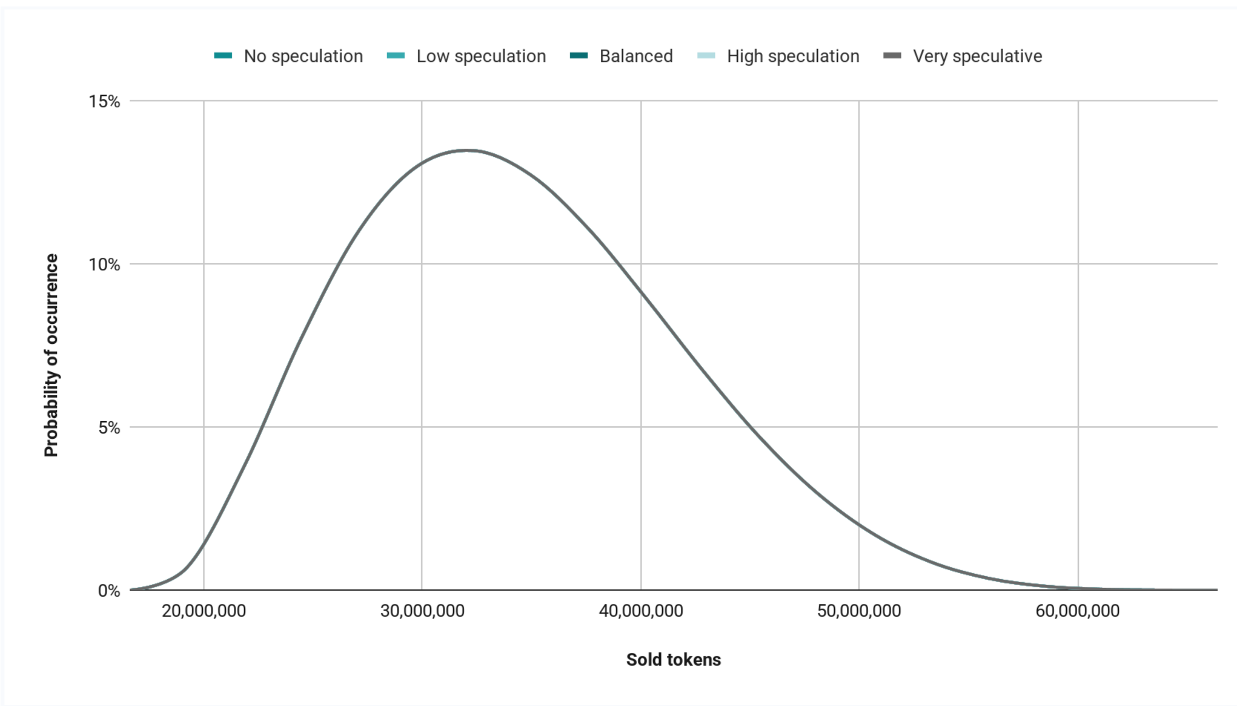

FIGURE 12 · *A discrete probability function, modeling the expected token sales within the first year.*

The above puts the reasonable total sell pressure between 16,600,619 tokens and 66,409,303 tokens. Assuming the goal of TGE price maintenance (i.e. no appreciation), this translates into 348,613 - 1,394,595 USD of total sell pressure.

Part of this sell pressure can be offset based on natural demand generated by the project. However since most projects either never reach substantial revenue within year 1 of operations or significantly overestimate what they can achieve, we recommend that the project accounts for no organic demand. Once actual revenue numbers are available, this can be revisited. Based on the above, we recommend the following liquidity levels for the project, within the first year of operations:

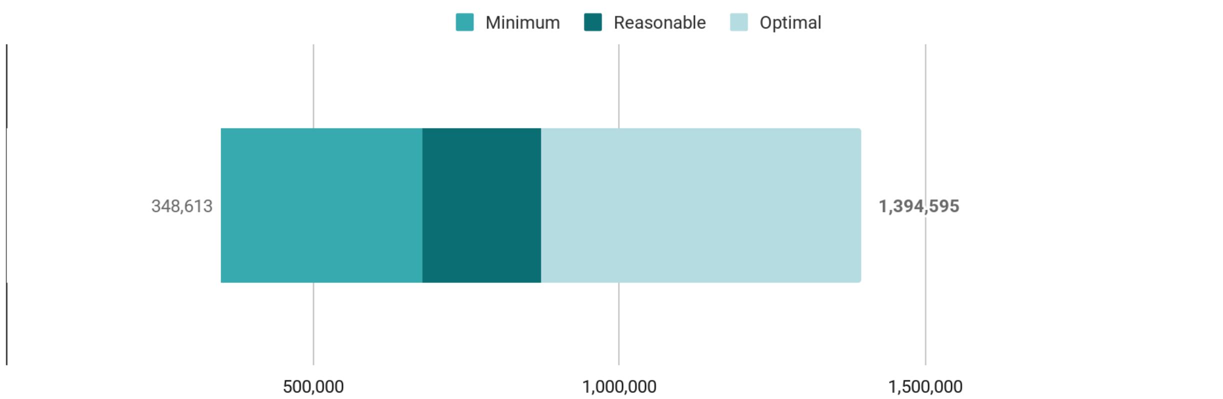

FIGURE 13 · *Recommended liquidity levels within the first year of operations*

Please note that all of the above recommendations are only valid, if you also follow our recommendation for a listing price below.

4.2 · LIQUIDITY DEPLOYMENT

Utilisation of Liquidity

We strongly recommend that you align the **size and utilization of the funds set aside for liquidity with a reputable Market Maker**. In this section, still we will provide you with our recommendations from a purely tokenomics perspective.

The main choice which you are facing is what % of the funds for liquidity go for direct liquidity (e.g. to be posted on a DEX) and what % of them go towards Market Makers or token buybacks in year 1. This ratio mainly depends on the amount of funds that you intend to set aside for liquidity. The closer you are to offsetting the entire sell pressure, the more effective buybacks become. The further away you are, the more efficient direct liquidity becomes.

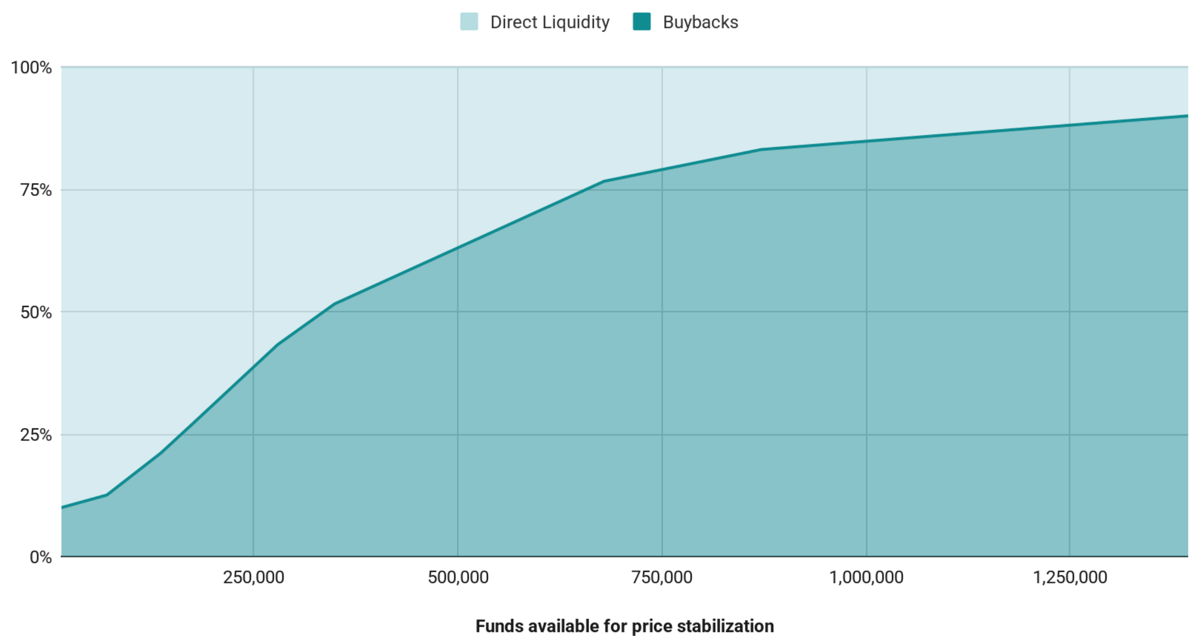

FIGURE 14 · *Recommended utilization of funds for price stabilization between Direct Liquidity and Buybacks/Market Makers, relative to the total funds available for price stabilization*

Listing Price

With most projects, we recommend that the initial price at which the token is listed is no more than 5%-10% higher than the largest token sale round. This ensures that the incentive to liquidate the tokens right away remains minimal. Based on this our recommended initial listing price for the ZYZ token is 0.021 USD per token.

Decentralised vs Centralised Exchanges

Picking the correct exchanges to be listed on can have a huge impact on the token health and overall success. Both centralised and decentralised exchanges have their pros and cons. For centralized exchanges, we strongly recommend listing only on Tier 1 exchanges. For decentralized exchanges, while listing on multiple exchanges can be an option (since it comes at no extra cost), it could lead to fragmented liquidity, focusing on 1 or 2 exchanges with the largest trade volume is the best option.

For the Zizou project in particular, since there is a pre-sale, those investors are likely to require a Centralised Exchange listing.

> **SNIPER·BOT·MITIGATION**
>
> If the project will be listed on Decentralised Exchanges, when creating the liquidity pool and deploying the initial liquidity, sniper bots are a valid concern. To minimize the risk, we recommend the following:
>
> - Deploy the pool several days before officially announcing it.

- For the period before the announcement, introduce a very large trade fee to the pool (30-50%).
- Notify your community that you have a pool in test mode, and specifically instruct them not to trade the token before the official announcement.
- To further reduce the chances of anyone using the pool - do not provide links or any additional information on where it is being deployed.
- After the test period, remove the fee and provide information to your community on how they can access the pool.

A

APPENDIX A

VALUATION

Internal modelling reference: scenarios, analytical valuation, multiples cross-check, and rewards sustainability.

INTERNAL · APPENDIX

Reference material for the project team. Modeling assumptions, scenarios, and methodologies underpinning the public-facing economic design. Sharing this externally, risks an unfavorable legal classification of the project.

In order to improve the readability of this paper, we have opted to separate the modeling findings (listed directly below) from the heavy methodology section, which can be found in the Valuation APPENDIX. This allows us to present the core findings at a glance below.

> **DISCLAIMER**
>
> All numbers in this appendix are model outputs from forward-looking assumptions. They are not forecasts, projections of return, nor representations of actual or expected token performance. Real-world outcomes might diverge materially from any modelled scenario.

A.1 · MODELING SETUP

Scenarios

In Finance predicting future behavior with precision is nearly impossible. Even with sophisticated historical data analysis and trend extrapolation, unexpected events or shifts in market dynamics can quickly undermine forecasts. This inherent unpredictability necessitates a modeling strategy that acknowledges the limits of our foresight.

To address these challenges, our valuation methodology relies on running a range of carefully constructed scenarios rather than banking solely on a single forecast. This scenario-based approach not only mitigates the risk of overreliance on any one prediction but also provides a more robust and flexible framework, enabling us to account for the myriad factors that could influence future outcomes. Below are our scenarios and how they differ.

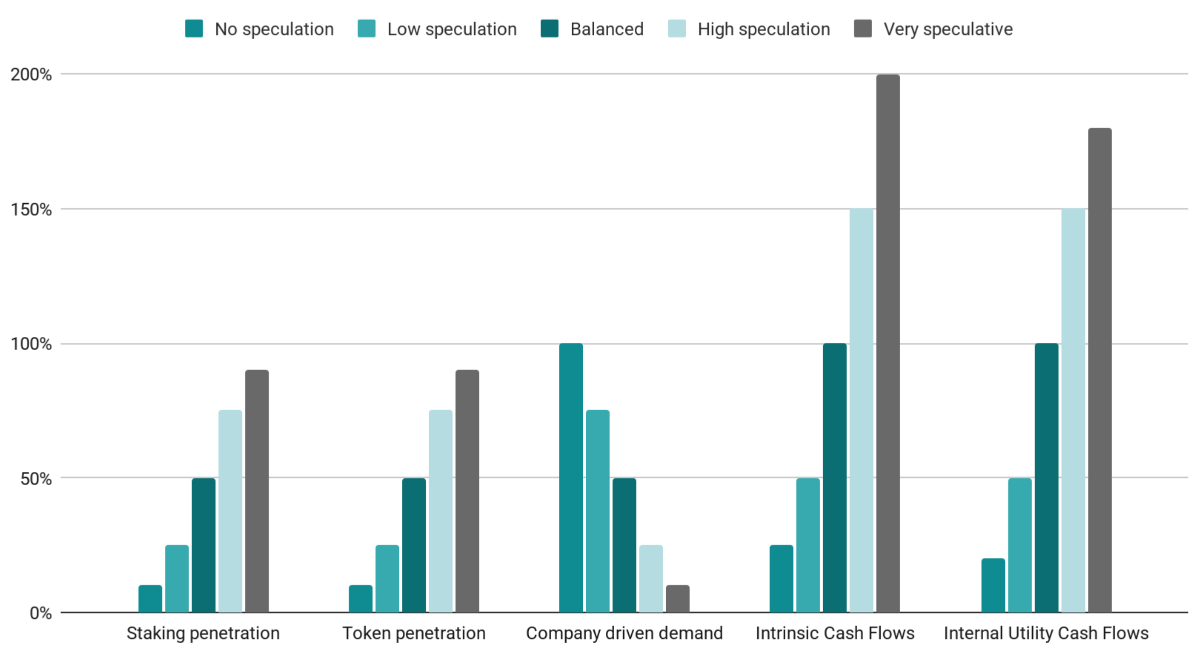

FIGURE 15 · *Differences between the scenarios*

Explanation of the inputs varied:
Staking penetration - different scenarios for Staking uptake.
- Token penetration - different scenarios for token usage uptake.
- Company driven demand - different scenarios for what % of the token demand is company driven vs speculation driven.
- Intrinsic Cash Flows - different scenarios for monetary value assigned to the core token value drivers.
- Internal Utility Cash Flows - different scenarios for the monetary value of the token utility.

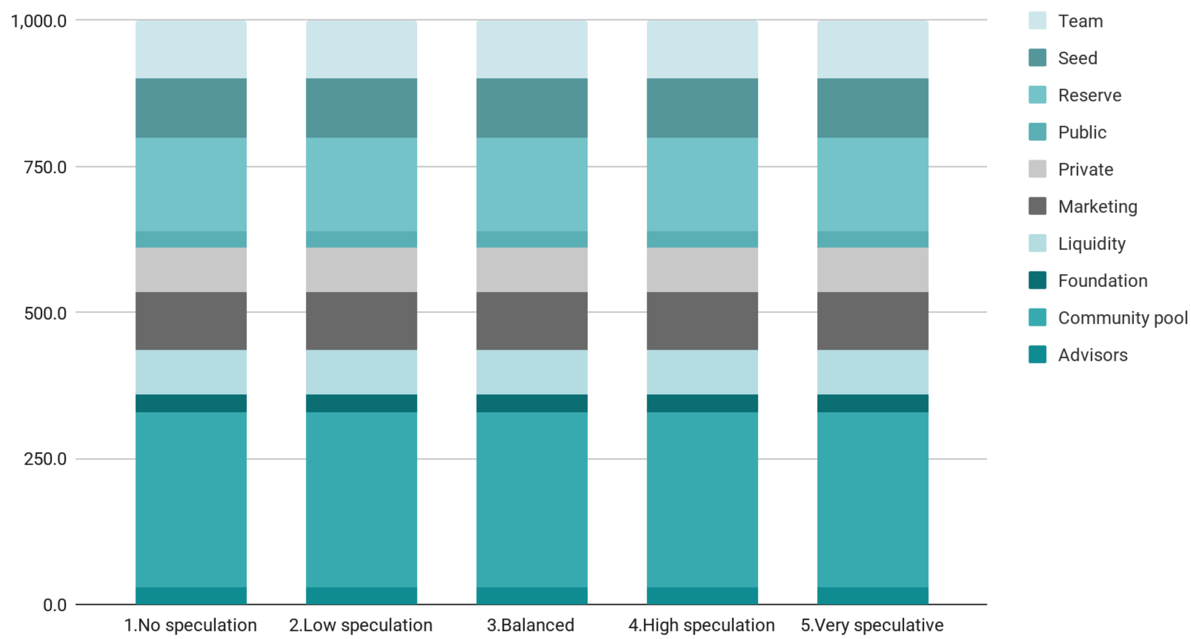

FIGURE 16 · *Token allocations across different scenarios*

A.2 · MODELING OUTCOMES

Analytical Valuation

Following the methodology outlined in the [Analytical Valuation] section of this document, together with our proposed [Allocations & Vesting] we can show the token rational demand, fundamental value and speculative price expectations.

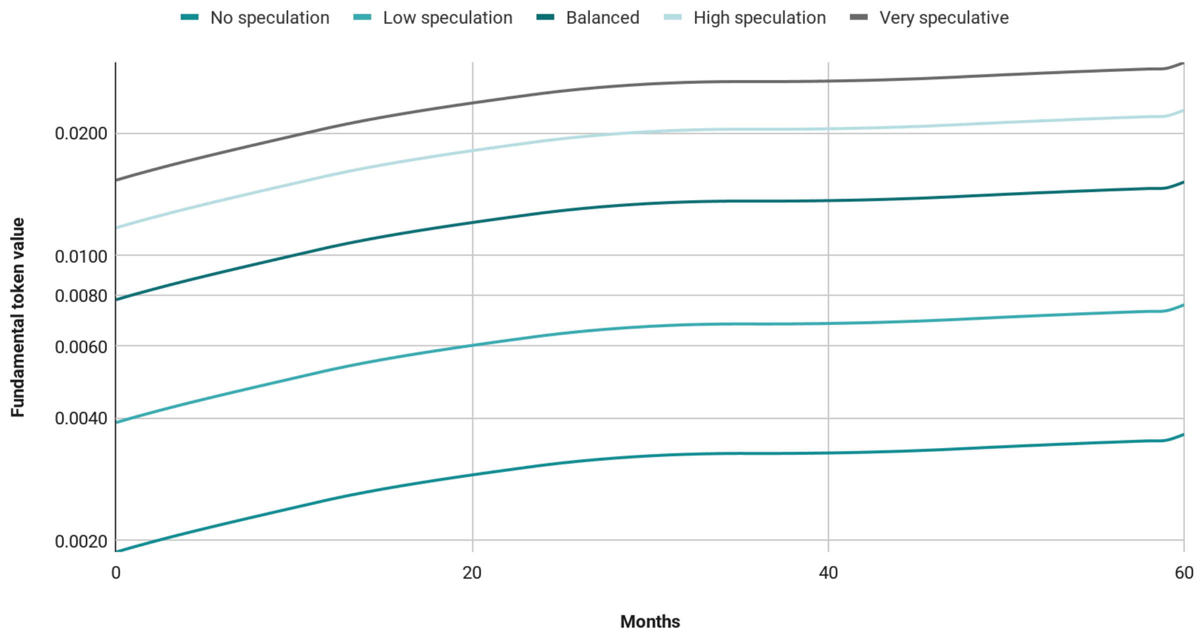

FIGURE 17 · Projected fundamental token value

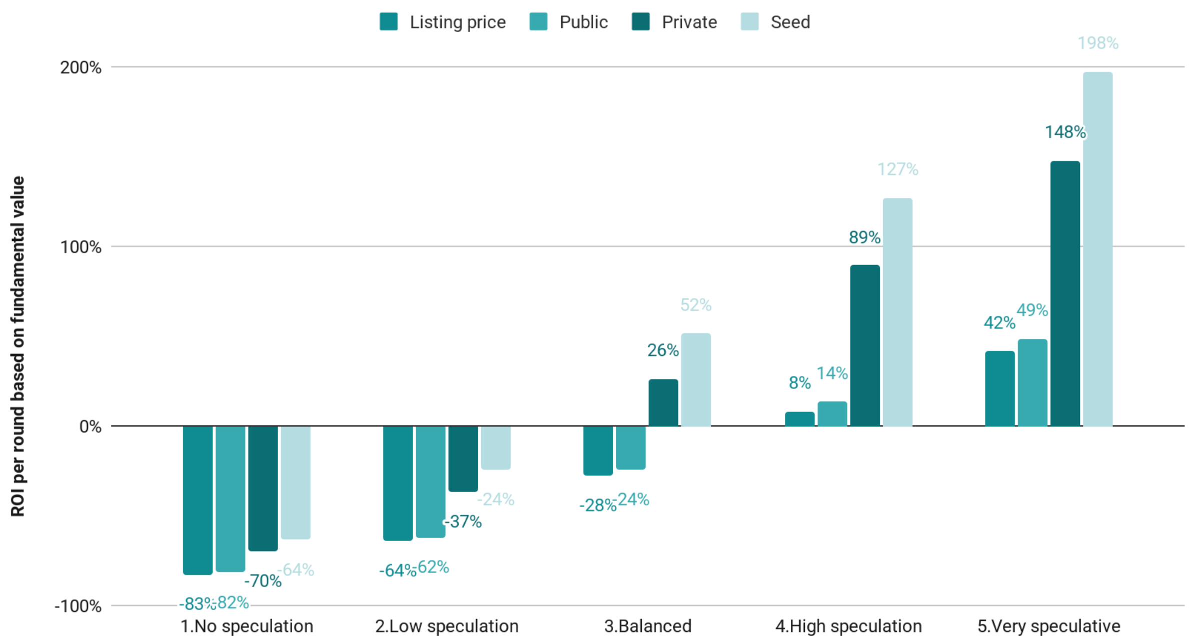

FIGURE 18 · Projected ROI per round based on Fundamental Value

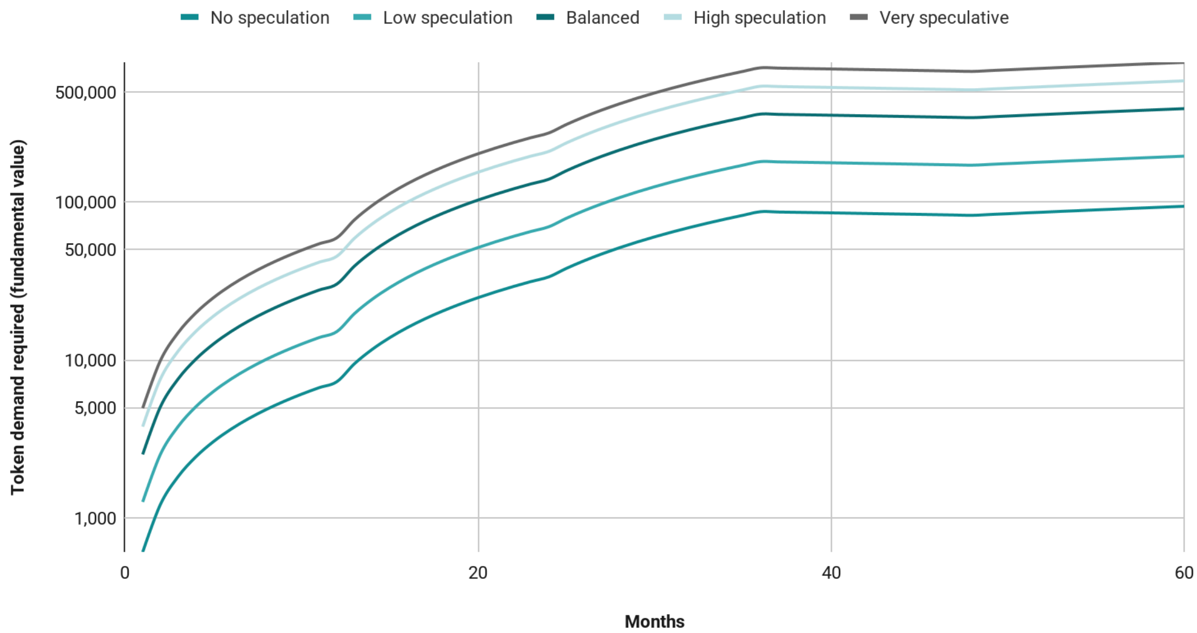

FIGURE 19 · *Projected required rational token demand (Intrinsic + Utility) in order to achieve the fundamental token value*

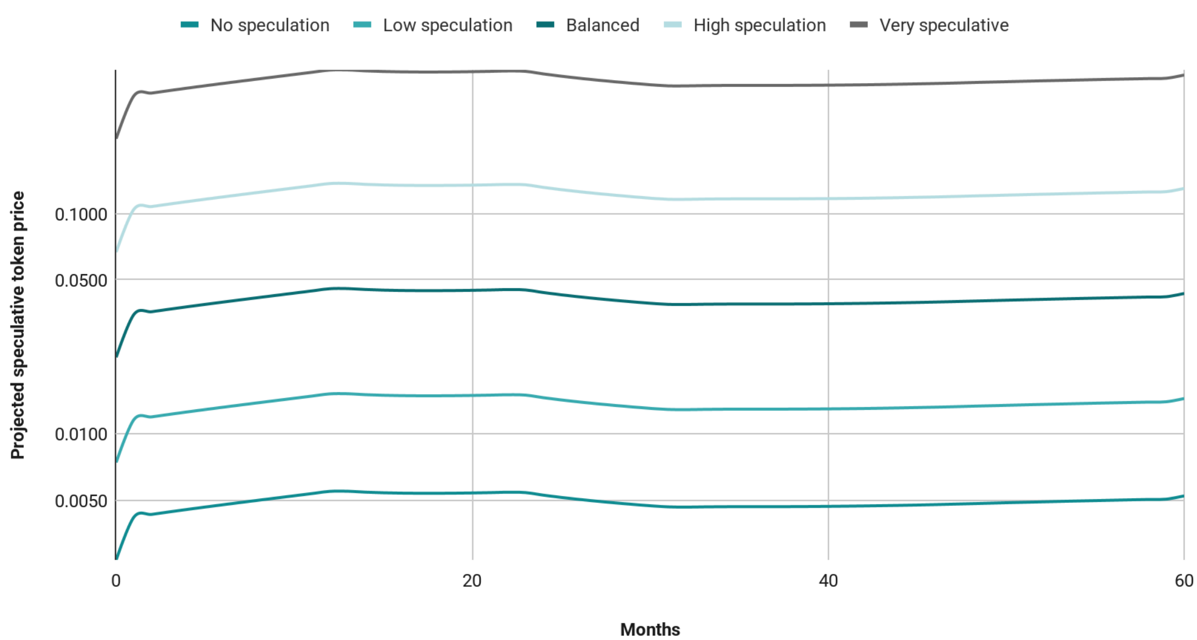

FIGURE 20 · *Projected speculative token price*

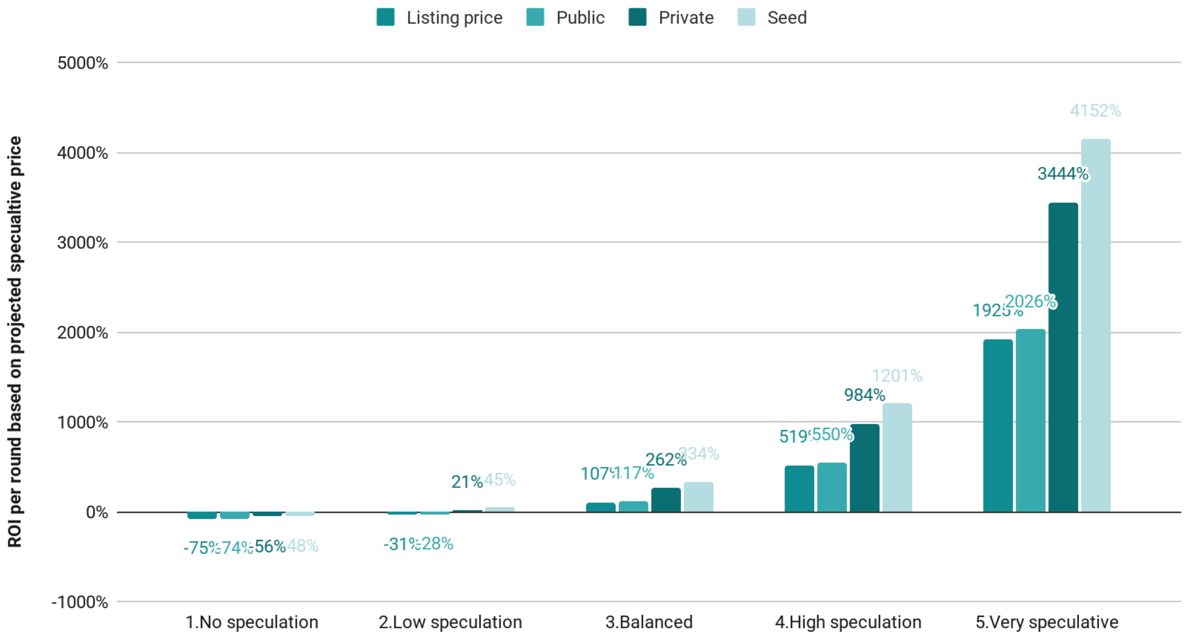

FIGURE 21 · Projected ROI per round based on Speculative Token Price

Model Assumptions

For the [terminal growth rate](), we use inflation data from the last 5 years.

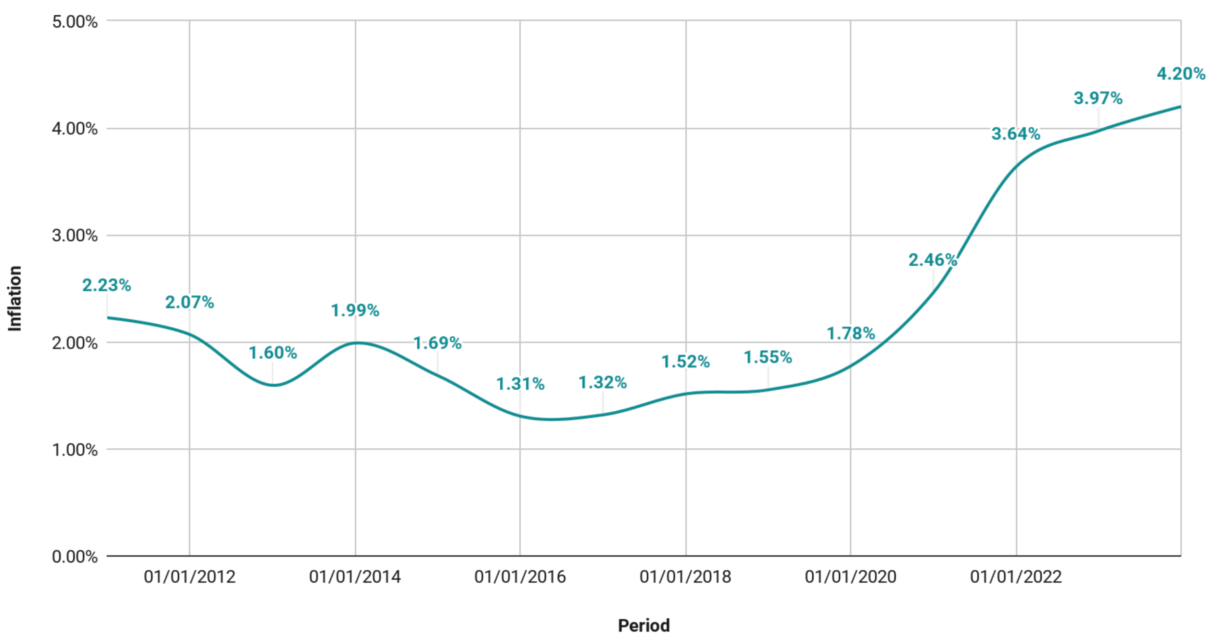

FIGURE 22 · Inflation - 5 year moving average

For the Discount Rate, using the [CAPM model](), we use the following companies as benchmarks:

- NASDAQ:COIN - Coinbase operates a large crypto trading, custody and staking platform, making it a strong comparable for DeFi access, digital-asset liquidity and token-linked platform economics.
- NASDAQ:GLXY - Galaxy Digital combines digital-asset trading, asset management and infrastructure services, closely matching the project's mix of crypto investment products and liquidity services.
- NYSE:BLK - BlackRock is a leading asset manager with portfolio management and risk technology capabilities, relevant for the project's managed pools and real-world-asset investment orientation.

The above gives us the final parameters used for the model:
- Discount rate: 50.0%
- Terminal Growth Rate: 4.00%

Using the assumptions as earlier outlined in this Appendix and our scenarios, we arrive at the expected cashflows for DCA within each scenario.

Baseline Scenario

Below are further deep-dive numbers on our baseline scenario: Balanced.

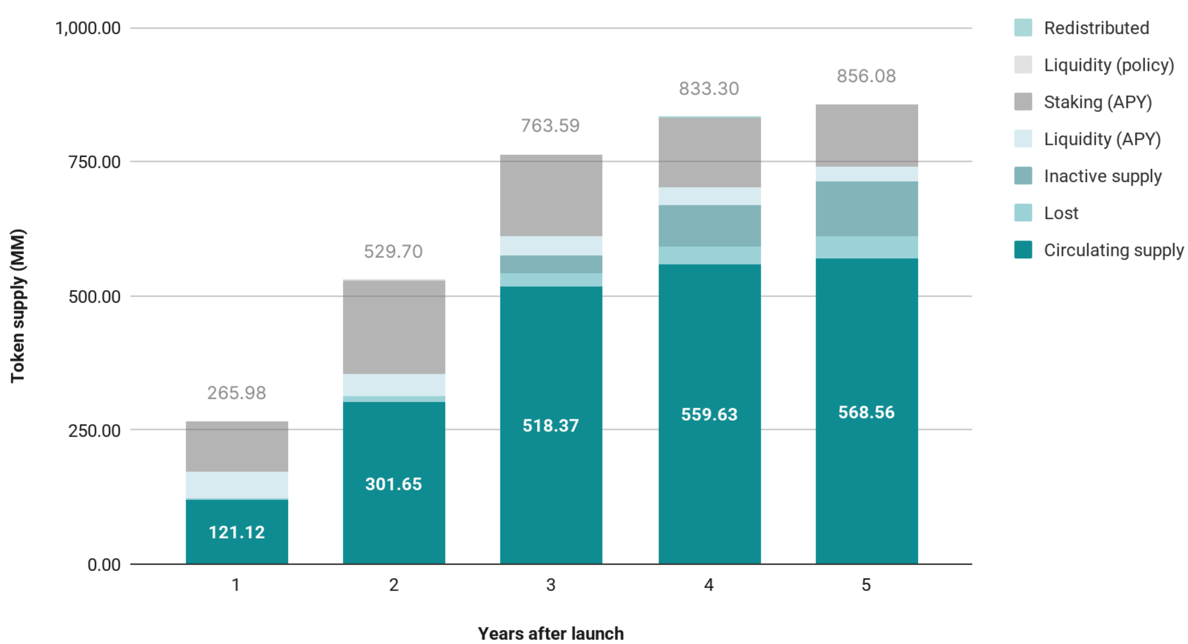

FIGURE 23 · Projected token supply dynamics after launch

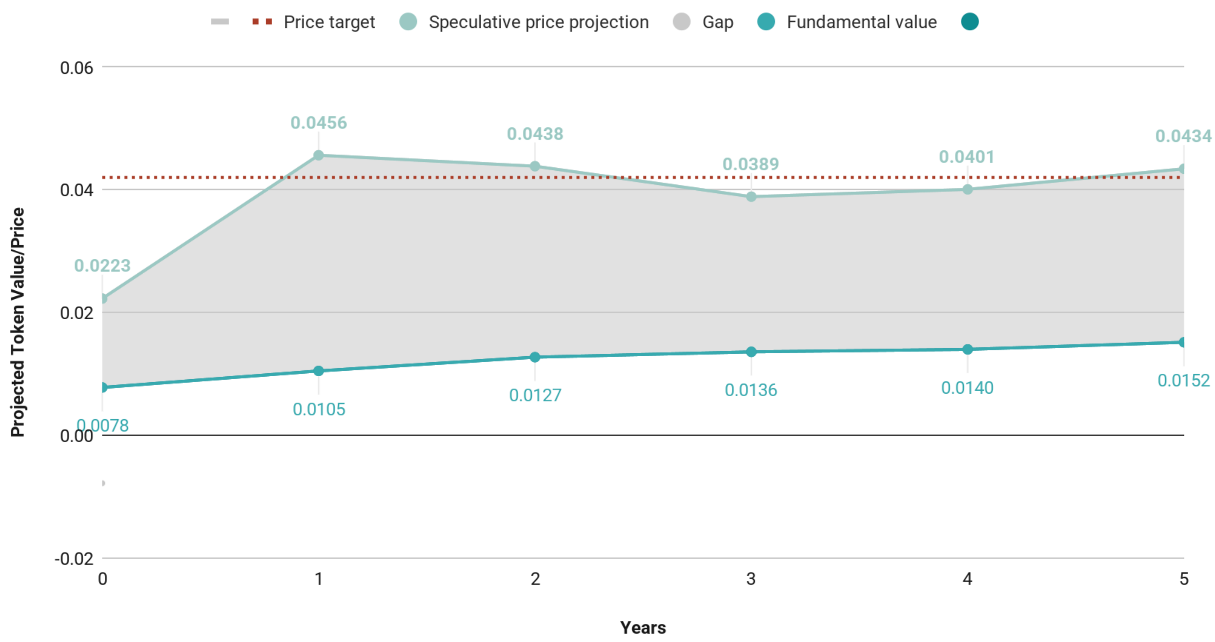

FIGURE 24 · *Projected token price gap - fundamental vs speculative*

The price target in the chart above is set as 2x the TGE price **AFTER applying the discount rate.** For a project to be in acceptable shape, the speculative price needs to clear this threshold. For the project to be in good shape, the fundamental value needs to clear this threshold as well.

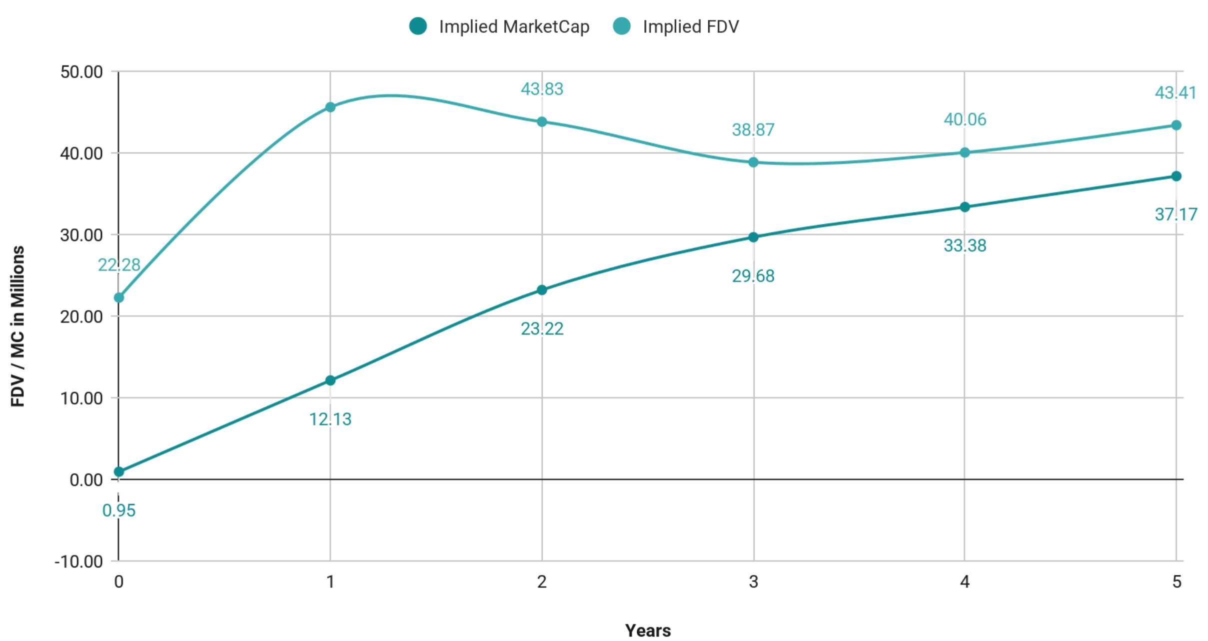

FIGURE 25 · *Projected price-implied token Market Capitalisation and Fully Diluted Valuation*

In order to achieve the above results, the company would need to reach a number of users as detailed in the table and assumptions below:

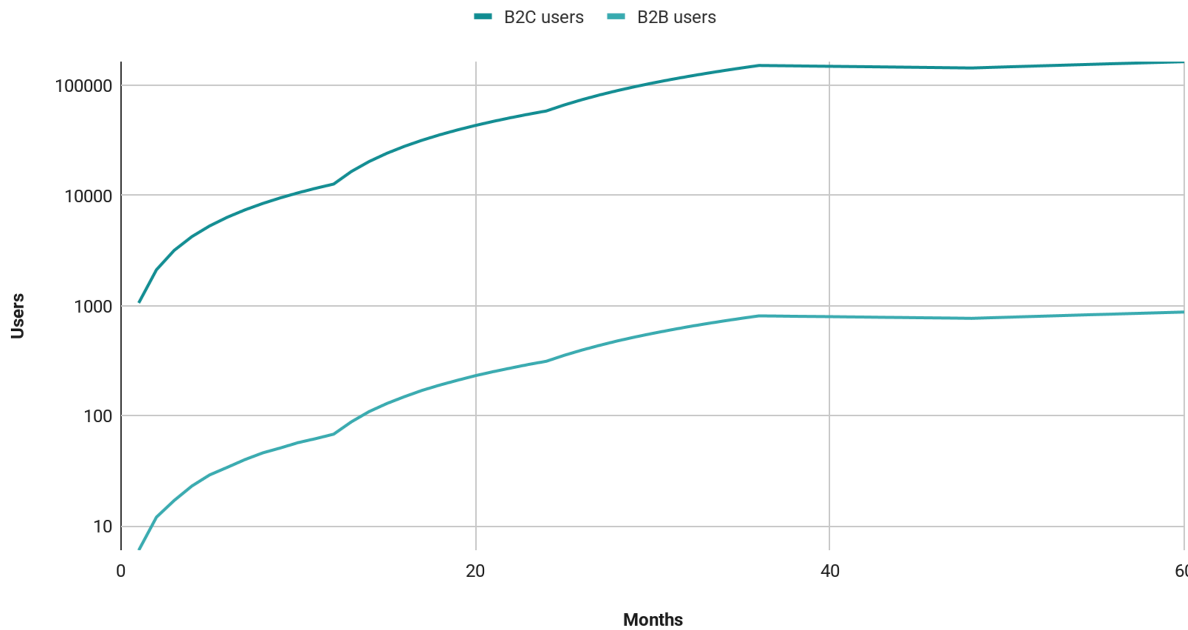

FIGURE 26 · Required total acquired users (pre-churn)

We base the user numbers on an assumption of 10% B2B clients, 90% B2C clients, and the following annual average revenue per user (ARPU) assumptions:

Churn: Average Churn assumed: 30.0%. Benchmarks: ChartMogul shows churn falls materially as account value rises, with median monthly customer churn moving from 6.1% at ARPA below $25 to 2.2% above $500, while CleverTap's BFSI benchmark says finance apps often retain only 15%–25% of users after a year. Zizou should land between those endpoints: We assume about 12% annual churn for B2B because integrations, staked governance, and asset positions create lock-in, and about 32% for B2C because usage is more episodic but still partially sticky once assets are deposited, which produces a weighted annual churn of 30% at a 10% B2B user mix.

B2C: Average Annual Revenue Per User (AARPU) assumed: 60.0 USD/pa. Benchmarks: Retail pricing benchmarks of 0.25% AUM for automated investing and 0.04%–0.60% taker / 0.00%–0.40% maker crypto execution fees bracket Zizou's likely monetization on pool participation and RWA/crypto pair activity. We therefore assume a typical individual keeps only a few thousand dollars on platform and trades or rebalances intermittently, yielding a conservative blended annual revenue of about $60 per B2C user.

B2B: Average Annual Revenue Per User (AARPU) assumed: 2,500.0 USD/pa. Benchmarks: Managed-vault fee stacks and institutional crypto execution fees of 0.04%–0.60% taker / 0.00%–0.40% maker suggest Zizou's business users can be monetized through both AUM-style and transaction-fee rails. We therefore model a typical professional customer at roughly $250k–$300k of managed or serviced on-platform capital with a blended take near 0.8%–1.0%, which supports about $2,500 annual gross revenue per B2B account.

Multiples

In this section we present valuation of the token based on "multiples" (price-to-fees and price-to-revenue) with methodology as described in the [respective section](). First let's explore the data for other projects relative to the fees/revenue collected:

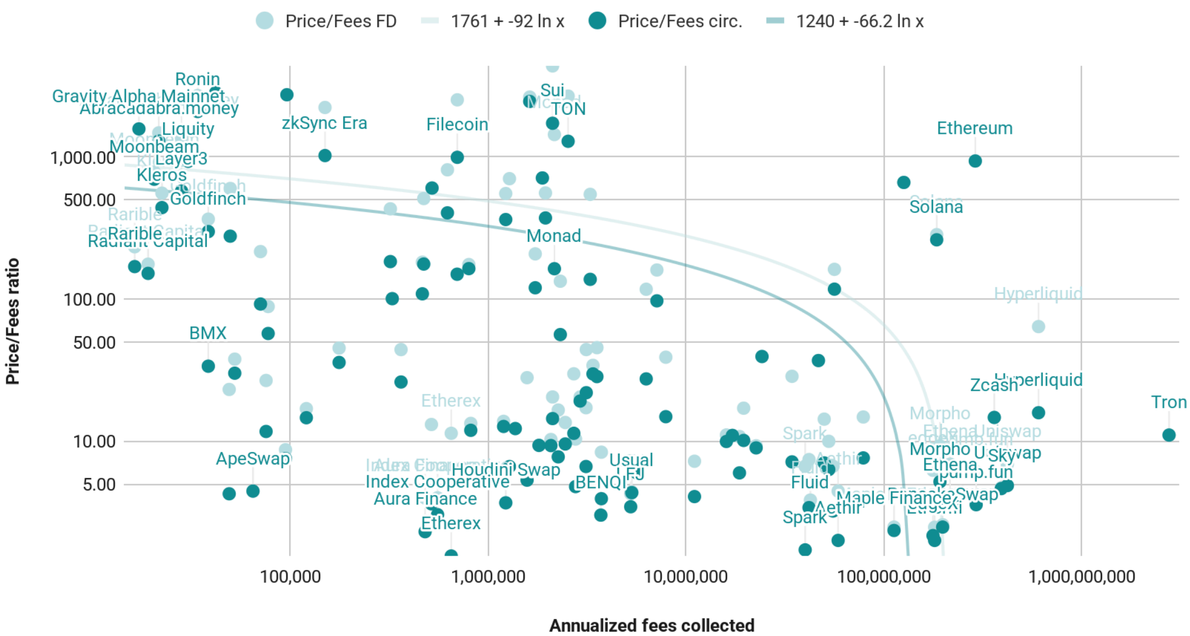

FIGURE 27 · Price/Fee ratio for notable projects

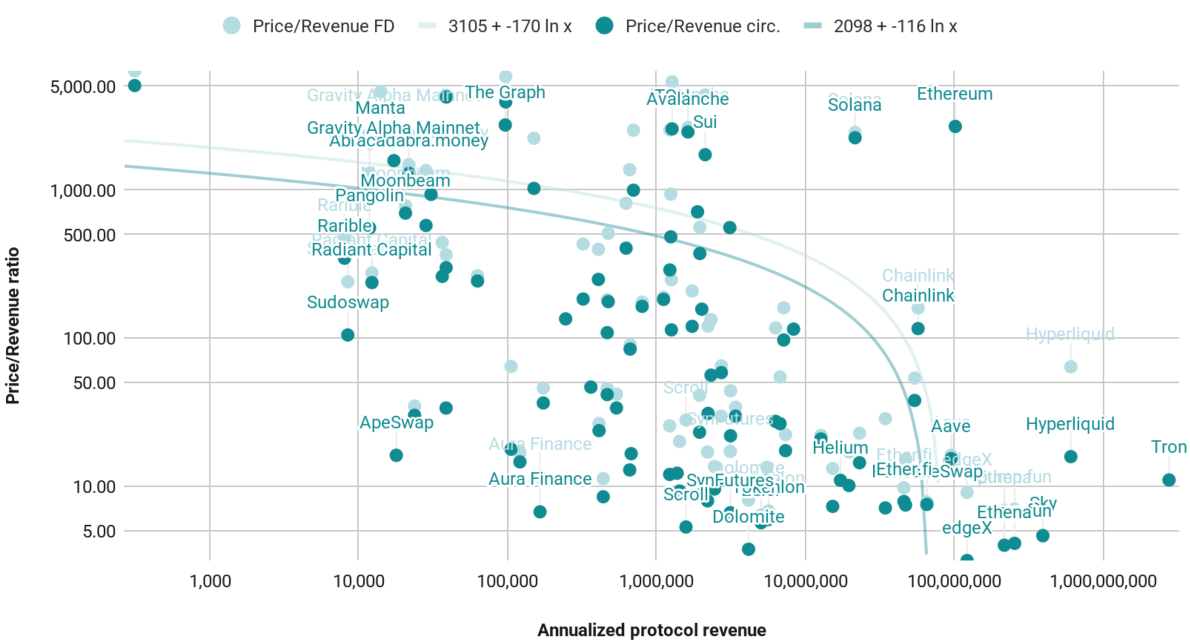

FIGURE 28 · Price/Revenue ratio for notable projects

Using the above ratios and our project's projected fees/revenue structure, we can estimate the token's price dynamic over time, across our scenarios, assuming that the price/fee and price/revenue follows a similar curve over time.

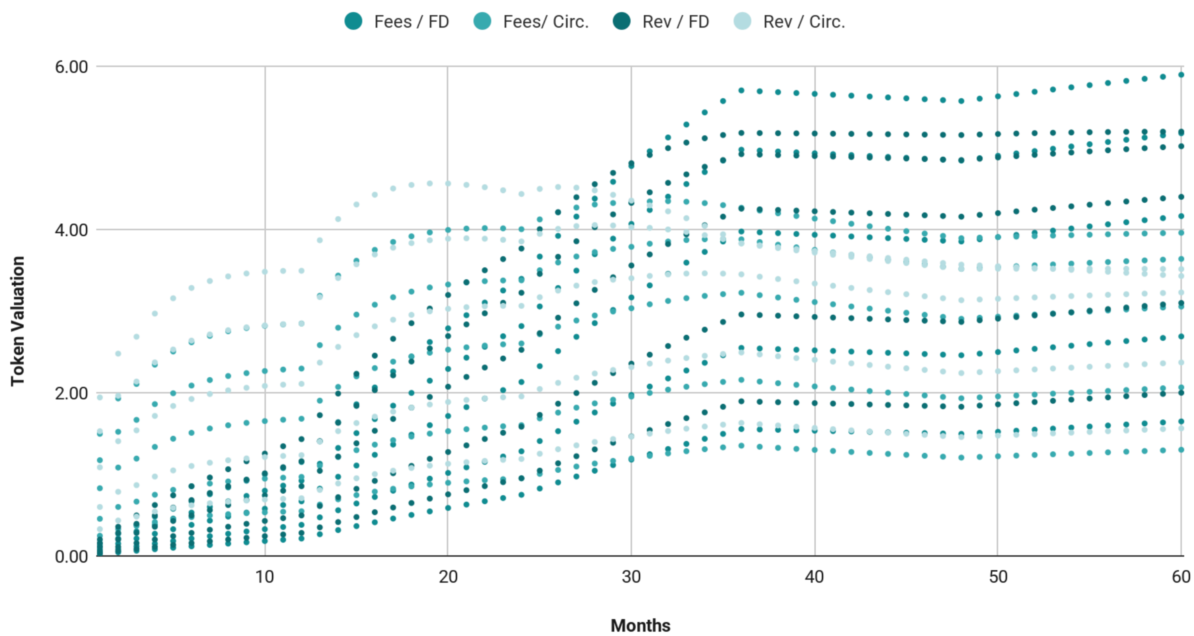

FIGURE 29 *· Token valuation using multiples, across different methodologies and scenarios*

The above puts the 5-year token value between 1.30 and 5.90 USD, with a most likely value of: 3.33 USD.

A.4 · INCENTIVES MODELING

Rewards Sustainability

In this section we review metrics on the rewards sustainability on our baseline scenario: Balanced. We can construct a prediction about how the Incentives Pool would behave in terms of:

- Inflowing tokens
- Outflowing tokens
- Net Incentives Pool balance at the end of the year based on all operations

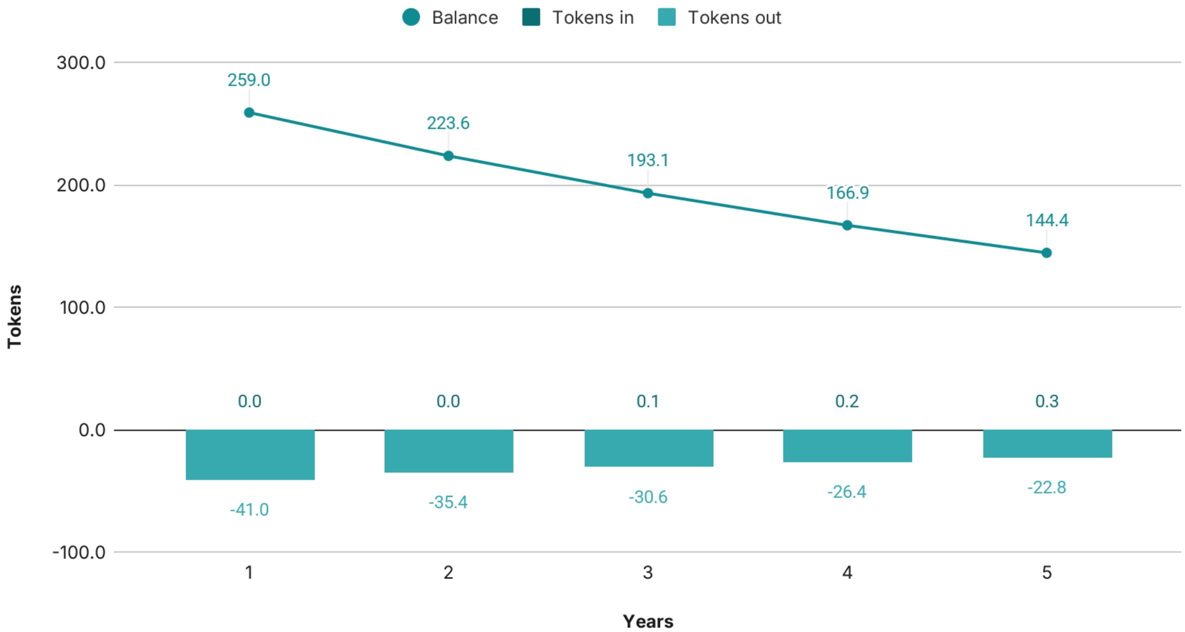

FIGURE 30 · Reward pool dynamics

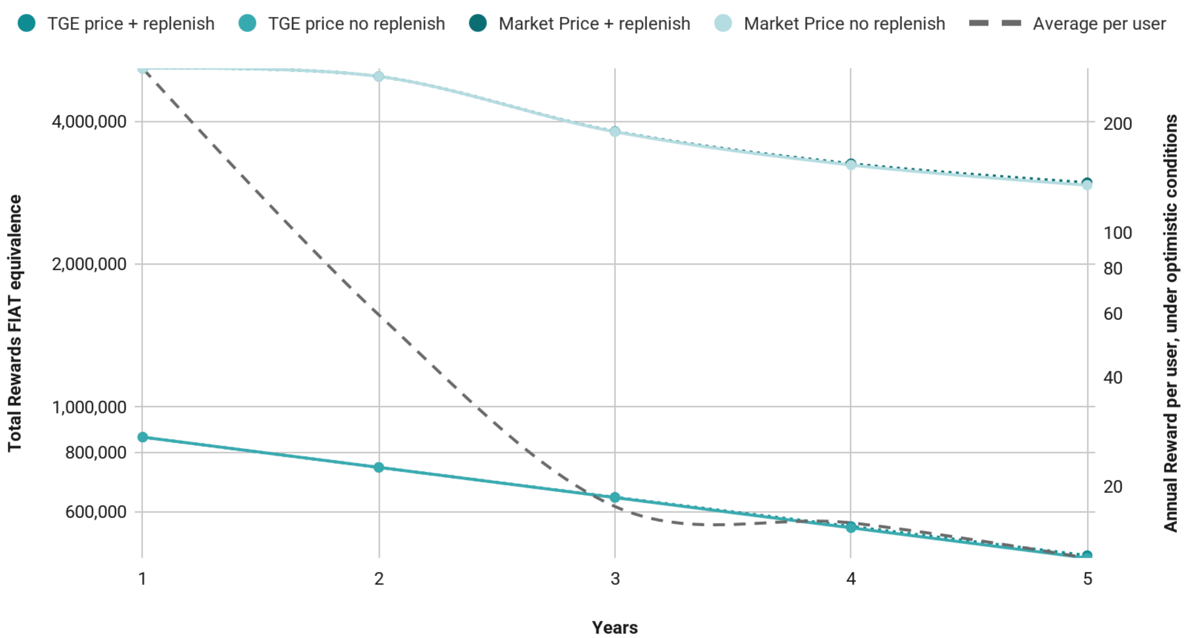

FIGURE 31 · Annual rewards Fiat equivalence depending on reward pool replenishment and reference price, as well as an average annual reward per user under the best price scenario

B

APPENDIX B

METHODOLOGY

Internal methodology reference: analytical valuation formulas, sensitivity testing, and multiples regression handling.

In the sections that follow, we will outline the valuation methodology used to estimate token price and sell pressure based on a series of assumptions as outlined in the previous sections. It is important to note that there is no valuation methodology that can predict the price of a token or behaviour of the market with any degree of certainty. Instead the purpose of this valuation is to provide a useful heuristic measure for the overall health and robustness of the tokenomics setup outlined in this paper.

B.1 · ANALYTICAL MODELING METHODOLOGY

Analytical Valuation

Supply-Agnostic Discounted Cash Flow Valuation.

Discounted Cash Flow Analysis (DCF) has long been one of the most widely used methodologies for valuing productive assets. The core principle behind DCF is that the value of an investment equals the present value of the future cash flows it is expected to generate. By discounting expected future cash flows back to the present using an appropriate discount rate, investors can estimate the economic value of an asset today. This methodology is deliberately framed as a discounted cash flow model rather than an exchange-equation (MV=PQ) approach. Velocity is indeterminate and highly speculative for most tokens; by pricing the right to future protocol cash flows directly, the framework sidesteps velocity as a required input.

In traditional equity valuation, DCF analysis is typically applied on a per-share basis. Future cash flows available to shareholders are estimated and then divided by the number of shares outstanding to obtain a per-share value. This approach works well when the share count is relatively stable or when future dilution can be estimated with reasonable certainty.

In tokenized systems, however, the situation is often more complex. Many token economies include mechanisms that dynamically alter supply over time. Examples include buyback-and-burn programs, staking incentives, token emissions, treasury allocations, or other protocol-driven supply adjustments. In such systems, the future token supply may depend on future token prices or other endogenous variables.

When supply depends on future price or protocol actions, calculating intrinsic value directly on a per-token basis introduces circular dependencies. The intrinsic value of a token depends on the future supply, but the future supply may depend on the future token price, which itself depends on intrinsic value. This makes it difficult to compute a consistent valuation using a traditional per-token DCF formulation.

To address this issue, our approach separates system-level value creation from token supply mechanics. Instead of immediately dividing value across tokens, we first calculate the total economic value generated by the system as a whole. Only after the system-level value has been determined do we translate that value into a per-token price using the per-period vested supply.

Determining System-Level Intrinsic Value

The first component of the model is the intrinsic value generated by the protocol's captured cash flows. These cash flows may originate from trading fees, platform usage fees, protocol revenues, or other sources that ultimately accrue economic value to tokenholders.

The present value of these expected future cash flows is calculated using the standard discounted cash flow framework:

$$V_{intrinsic} = \sum_{t=1}^{T} \frac{CF_t}{(1+r)^t} + \frac{TV_T}{(1+r)^T}$$

Where:

- CF is an expected future cash flow at period t
- r is the discount rate, also referred to as the cost of capital and commonly estimated via the CAPM (Capital Asset Pricing Model)
- TV is the terminal value (or exit value) of the investment

Determining Utility Value

In addition to intrinsic value generated by captured cash flows, many token economies generate economic benefits through token utility. Utility value arises when holding or using the token provides economic advantages to participants within the ecosystem.

Examples of such benefits may include transaction fee discounts, preferential access to services, reduced platform fees, governance privileges, or other forms of economic cost avoidance. While these benefits may be realized primarily by active users of the token, they nevertheless influence the overall demand for the token and therefore affect its market price.

To account for this, we estimate the system-level utility value created by these benefits. This is calculated as the present value of the total economic savings generated by token usage across the ecosystem.

$$V_{utility} = \sum_{t=1}^{T} \frac{U_t}{(1+r)^t} + \frac{TV_T^{utility}}{(1+r)^T}$$

Where U represents the total economic benefit or cost avoidance generated by token utility in period t. Utility value is computed at the aggregate level and distributed across vested supply, reflecting that in efficient markets the marginal buyer prices tokens based on expected average utility rather than realized individual utility. Individual heavy users may realize utility above this average, while non-users realize none - the token price reflects the expected value to the marginal buyer.

Translating Value into Token Price

The total economic value generated by the token ecosystem combines both intrinsic and utility components:

$$V_{core} = V_{intrinsic} + V_{utility}$$

This value represents the total economic surplus produced by the system. This value is determined independently of token supply.

In traditional equity valuation, per-share value is obtained by dividing total firm value by the number of shares outstanding. In tokenized systems this approach breaks down, because token supply evolves significantly over time through vesting, emissions, buybacks, and burns. Dividing total system value by current-period supply would over-attribute future cash flows to currently-circulating tokens. Future cash flows will in reality be shared with tokens that vest in later periods, and a correct per-token valuation must account for this.

We therefore compute the per-token core price directly, as the present value of per-period cash flows attributable to each outstanding token at each point in time:

$$P_{core,t} = \sum_{s=t+1}^{T} \frac{(CF_s + U_s)/S_s}{(1+r)^{s-t}} + \frac{(CF_T + U_T)/S_T \cdot (1+g)}{(r-g)(1+r)^{T-t}}$$

Where $S_s = S_s^{vested}$ is the vested supply at period s. Each period's cash flow is divided by the supply outstanding in that period before being discounted, correctly accounting for dilution as it occurs. Vested supply is used in the fundamental price calculation to preserve its deterministic, forward-known character; discretionary supply reductions such as buybacks, burns, and locks are captured separately in the market price overlay through the scarcity ratio.

In the limiting case where S is constant across all periods, this formula reduces to V_{core}/S - the traditional per-share DCF. The per-period division generalizes the approach to time-varying supply.

While the core valuation framework determines the fundamental economic value per token, token markets do not always price tokens strictly according to this value. In practice, token prices are influenced by reductions in effective circulating supply and by speculative demand.

To account for these effects, the model introduces a multiplicative pricing overlay on the fundamental per-token price:

$$P_{market,t} = P_{core,t} \cdot \frac{S_t^{entitled}}{S_t^{circulating}} \cdot \frac{1}{\delta}$$

Where:

- $S_t^{entitled}/S_t^{circulating}$ captures scarcity effects from vesting locks, staking, and long-term holding. Economically entitled tokens that are not actively circulating create effective float reduction.
- $\delta \in (0, 1]$ represents the share of demand driven by fundamentals. $\delta = 1$ means no speculative premium; smaller values amplify price through speculation-driven demand. δ is not estimated from data, it is a sensitivity parameter used to bracket market outcomes under different assumptions about speculative demand, allowing users of the framework to stress-test tokenomics setups across a range of speculative regimes.

The multiplicative form ensures both effects compose correctly: zero scarcity ($S^{entitled} = S^{circulating}$) and no speculation ($\delta = 1$) collapses the overlay to 1, recovering the fundamental price. These factors do not change the underlying economic value of the system - they influence how that value is capitalized by the market.

Because buybacks are price-responsive by design, the system contains a feedback loop: price depends on supply, supply depends on buybacks, and buybacks depend on price. We resolve this through an iterative solution, converging to a fixed point where price, supply, and buyback activity are mutually consistent.

Determining Cashflows

Dividends and buybacks are two primary methods used to return excess cash to tokenholders. While they operate differently, under certain conditions they can be practically equivalent in their economic impact on tokenholders' wealth.

Dividends: When a company pays dividends, it distributes a portion of its earnings directly to all tokenholders, typically on a per-token basis. This provides immediate cash income to tokenholders but reduces the company's cash reserves by the total amount paid. Consequently, the company's value decreases by this amount, which may lead to a proportional drop in the token price.

Buybacks: In a buyback, a company repurchases its own tokens from the open market (boosting the token's price), reducing the total number of outstanding tokens. This action decreases the company's cash reserves by the amount spent on the repurchase. With fewer tokens outstanding, the future dividends per token may increase.

Capital Appreciation: In many token systems, value may also accrue through the appreciation of tokenized assets held by the protocol or underlying business growth that increases the economic value of the system over time. In such cases, tokenholders benefit from this appreciation either through an increase in the market price of the token or through the ability to periodically realize gains by selling a portion of their holdings. Economically, this is analogous to the dividend and buyback cases. If a tokenholder sells a portion of their tokens to realize gains, the outcome resembles a dividend distribution. If the value instead remains embedded in the token price, the effect is similar to a buyback mechanism where value is retained within the system and reflected through price appreciation.

Practical Equivalence: In an ideal scenario (absent taxes, transaction costs, and assuming efficient markets) dividends, buybacks, and capital appreciation can be economically equivalent from the perspective of tokenholder wealth. In each case, tokenholders ultimately receive the same underlying economic benefit generated by the system. The difference lies only in how and when that value is realized. Whether value is distributed directly through dividends, embedded in token price through supply reductions, or realized through capital appreciation and partial token sales, the total economic value available to tokenholders remains the same. This concept is closely related to the Modigliani-Miller theorem, which suggests that in perfect markets the method of distributing value to investors does not affect the overall value of the firm.

Determining Discount Rate - Capital Asset Pricing Model

The Capital Asset Pricing Model (CAPM) describes the relationship between systematic risk and the expected return for assets, particularly stocks. CAPM is widely used throughout finance for pricing risky securities and generating expected returns for investments, given the risk of those assets and the cost of capital and is typically used as a scientific way in determining discount rates.

The formula for calculating the expected return of an asset given its risk is as follows:

$$ER_i = R_f + \beta_i(ER_m - R_f)$$

Where:

- ER_i is the expected return of investment
- R_f is the risk-free return
- β_i is the beta of the investment
- $(ER_m - R_f)$ is the market risk premium

For the numbers above, we have used the following:

- Risk-free return is the theoretical return attributed to an investment that provides a guaranteed return with zero risks. In this case, we are using FVX - Chicago Board of Options Exchange's 5-Year Treasury Note Yield Index.
- The beta of an investment is a measure of how much risk the investment will add to a portfolio that looks like the market. If a stock is riskier than the market, it will have a beta greater than one. If a stock has a beta of less than one, the formula assumes it will reduce the risk of a portfolio.
- The market risk premium is the difference between the expected return on a market portfolio and the risk-free rate. For the market rate of return, we have used the following broad spectrum ETFs:
    - VFIAX - tracking the performance of its benchmark index, the S&P 500.
    - VIIIX - tracking the performance of a benchmark index that measures the investment return of large-capitalization stocks.
    - VTSAX - tracking the performance of a benchmark index that measures the investment return of the overall stock market.

Crypto risk adjustment. Standard CAPM with equity market inputs systematically understates the cost of capital for crypto assets. Empirical research on crypto returns (Liu & Tsyvinski, 2022) documents crypto market risk premiums materially higher than those of equity markets - on the order of 3x to 4x. To reflect this asset-class-specific risk, we apply a crypto risk adjustment multiplier to the CAPM-derived discount rate:

$$r_{adjusted} = R_f + \mu \cdot \beta_i \cdot (ER_m - R_f)$$

Where $\mu \geq 1$ is the crypto risk adjustment multiplier. We use a default value of $\mu = 2$, which doubles the equity-derived risk premium while leaving the risk-free component unchanged, reflecting elevated crypto-specific risk without distorting the time value of money. Users of this framework may adjust μ between 1 (no adjustment, pure equity-CAPM) and 3 (full empirical alignment with observed crypto risk premiums) based on the specific risk profile of the token under analysis. This treatment parallels established practice in corporate finance, where private-company valuations routinely add illiquidity premiums, small-cap adjustments, or country risk premiums on top of base CAPM.

Determining the Terminal Growth Rate

In financial valuation, particularly within the Discounted Cash Flow (DCF) model, the Terminal Growth Rate represents the constant rate at which a company's free cash flows are expected to grow indefinitely beyond the explicit forecast period. This rate is central to calculating the terminal value, which accounts for the bulk of a company's valuation in a DCF analysis. Typically the Terminal Growth Rate is estimated as either:

- **Gross Domestic Product (GDP) Growth:** A common approach is to set the terminal growth rate in line with the long-term nominal GDP growth rate of the country or region where the company operates. This assumes the company will grow at a pace consistent with the broader economy. Typically, this rate ranges between 3% and 4%.

- **Inflation Rate:** Alternatively, aligning the growth rate with the expected long-term inflation rate (historically around 2% to 3%) reflects a more conservative stance, suggesting the company's growth will keep pace with price level increases.

In our estimates, we use inflation rate, averaged over the last 5 years for determining the Terminal Growth Rate.

Protocol mortality consideration. Standard DCF assumes the underlying entity operates in perpetuity, an assumption that holds reasonably well for mature businesses but may be aggressive for early-stage protocols, where empirical survival rates past year 3 are materially lower than for established firms. Users of this framework applying it to early-stage protocols should consider adjusting the terminal value to reflect this mortality risk, for example by applying an explicit annual hazard rate to the terminal value, or by using a more conservative terminal growth assumption than inflation. The methodology itself remains agnostic to this adjustment, as appropriate mortality assumptions depend on protocol-specific factors beyond the scope of this framework.

Determining circulating supply

Our estimates of the circulating supply are based on:

- The **monetary and fiscal policies** affecting supply for each scenario such as buybacks, rewards, liquidity and others.
- Inactive supply: For each cryptocurrency, a portion of the supply is held by long-term holders and is not available for trading. The amount varies widely per token, with Bitcoin at around 22% and other tokens like Stellar at a high of 84%. CoinMetrics estimates this share is between 20% and 40% for most coins. In our estimates, we use a conservative estimate of 30% and on top of that we **include any forms of token staking within this number** (making it even more conservative). As a result, the free float reduction appears on the graph below only in years when the projected staked amount is lower than the target free float reduction. The valuation framework distinguishes between *vested supply* (S^{vested}), all tokens that have vested per the issuance schedule, used in the fundamental price calculation, *economically entitled supply* ($S^{entitled}$), vested tokens net of burns and long-term locks, and *circulating supply* ($S^{circulating}$), tokens actively available for trading. The ratio $S^{entitled}/S^{circulating}$ captures effective scarcity and is used in the market price overlay. Buybacks, burns, and long-term locks reduce economically entitled and circulating supply but not vested supply, which follows the deterministic issuance schedule. Vesting schedules reduce only circulating supply in the short term through their effect on what is actively tradable.
- A small share of tokens will be **lost each year due to lost private keys**. We conservatively estimate that 0.5% of circulating tokens (vested tokens that are not permanently removed from circulation) are lost each year. This estimate is conservative. Studies have reported that about 4 million bitcoins were lost over the prior ten years, which was roughly 25% of the available bitcoin supply as of 2017. Other estimates place the share of provably lost coins closer to 11%.

Multiples

Multiple valuation is a relative valuation method widely used in traditional finance to assess a company's value based on comparable market metrics. Instead of forecasting detailed cash flows as in discounted cash flow (DCF) analysis, multiples valuation relies on readily available financial ratios drawn from similar companies (peer groups). Common multiples include things like Earnings Per Share (EPS) and or EBITDA to Enterprise Value (EV).

Due to the nature of tokens, in cryptocurrency valuations, we typically use other ratios, which we will explore in this section.

We define two core ratios.

- **Price-to-fees** is the token market capitalization (fully diluted or circulating) divided by the gross fees which the protocol collects from the end users.
- **Price-to-net revenue** is the token market capitalization (fully diluted or circulating) divided by the portion of the fees which goes directly to the protocol.

Another way to say this is that the Price-to-net revenue is equal to the Price-to-fees excluding any allocations for things like: Burning, Buybacks, Replenishing of reward pools, Incentives for users and.

A good example of the difference between the Price-to-fees and Price-to-net revenue are projects like UniSwap , where the protocol collects a 0.3% fee on each transaction, however none of this goes to the protocol directly - all of it is distributed back to liquidity providers. Thus we can say that UniSwap has a Price-to-fees ratio, but does not have a Price-to-net revenue ratio.

How do we determine comparable projects? Unfortunately data for fees and revenue is not widely available for crypto projects yet. Additionally some of the data is skewed due to low amounts of fees collected or huge project capitalisation, resulting in unrealistically low or high multiples. This is why rather than focusing on a couple of comparable projects (which might be wildly unrepresentative), instead we focus on the broader crypto industry as a whole and remove outliers from the data. To avoid those issues, we remove projects which fall above the 90.0% percentile of the entire dataset, and ones which are below the 10.0% percentile.

D

APPENDIX D

DISCLAIMERS

Authors and Disclaimers.

Limitations

> **"The only function of economic forecasting is to make astrology look respectable."**

It is important to note that the blockchain and cryptocurrency areas are still very new. There is little to no historical data, past performance results, and academic research on the topic of cryptocurrencies, let alone on the tokenization, economics, and long-term valuation of those asset classes. Stocks(equity) have been around since the early 1600s, but it is only in the past 100 years that we have begun to have more comprehensive and widely accepted valuation models. However, they are still subject to bias and interpretation and suffer from the quality of their inputs. On the other hand, cryptocurrencies have been around since 2008, with a broader recognition around 2016 and an explosion in the number of tokens in 2017. As such, it is way too early to evaluate or comment on the performance, monetary policy, or models behind any of them. As a result, we prefer to rely on sound economic principles backed by data and reasonable assumptions.

Furthermore, any financial projection should generally be treated as a target rather than a prediction. Their purpose is to ensure that the project has sensible and achievable goals, and upon reaching those goals, the rest of the numbers will add up and make sense. On the other hand, they cannot predict the future, nor account for all possible variables and scenarios with any reasonable degree of certainty.

Finally, this document is created by FinDaS with the goal of representing an optimal token economy for the project, within the confines and requirements specified by the project. There might be figures, projections, monetary and fiscal policies, that were requested by the project and not recommended by FinDaS.

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