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Exploring Tokenomics Models and Developments

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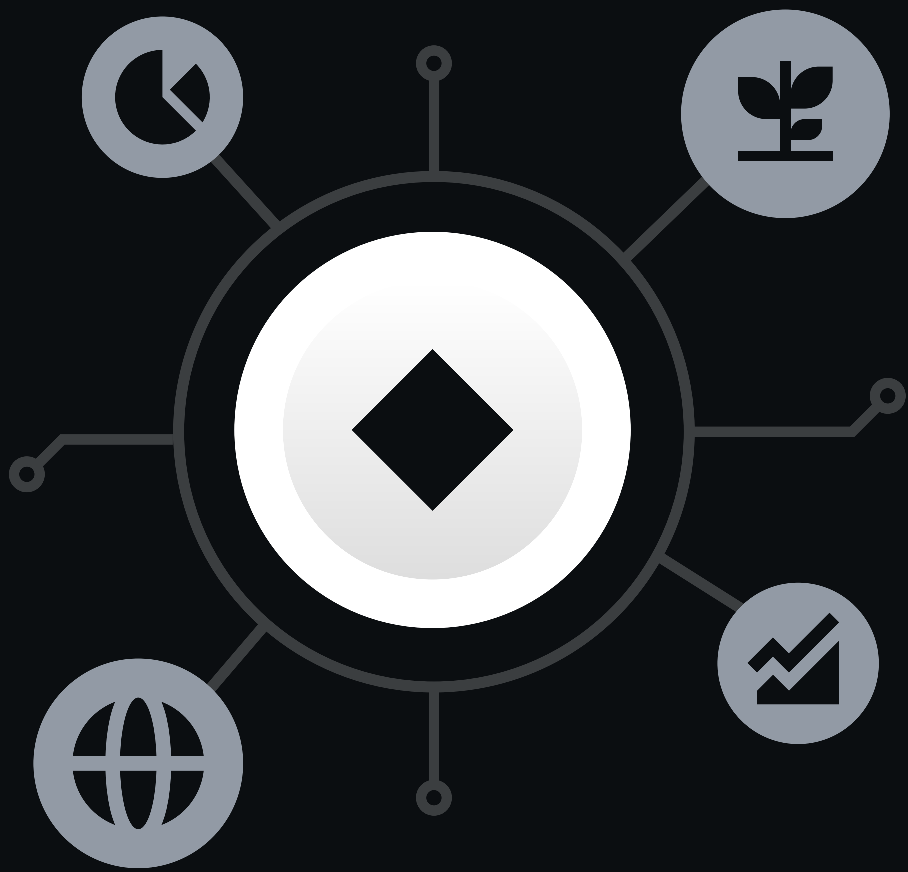

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1 Key Takeaways

- In this report, we will discuss several key challenges faced by many crypto projects, and analyze how a sustainable tokenomics design may be helpful in tackling these challenges.
- Many crypto projects experience numerous pain points such as high inflation rate of native tokens, low capital efficiency, centralized governance, conflicts of interest, misuse of treasury funds, limited liquidity, and a lack of value accrual to the token. An effective tokenomics design may be helpful to mitigate most of these issues and risks.
- In light of this, we've gleaned some of the industry's practices and have summarized them into distinct areas of tokenomics design. These include Token Allocation, Token Vesting Schedule, Maximum Inflation, and Value Accrual.
- An observation is that of dividing the treasury into two distinct funds: the Long-Term Treasury Fund ("LTF") for long-term, strategic uses, and the Short-Term Growth Fund ("SGF") which is earmarked for immediate, operational purposes.
- "Maximum inflation" is a key metric to monitor that considers a token's initial circulating supply and its vesting schedule.

2 Introduction

While cryptocurrency has witnessed phenomenal growth over the past few years, a few challenges remain for this fast-growing industry, particularly pertaining to tokenomics design. These include issues such as **high inflation rates, low capital efficiency, centralized governance, conflict of interests, abuse of treasury funds, low floating amounts, lack of value accrual and instances of having a token generation event ("TGE") occurring prior to product development, among others**.

To facilitate sustainable growth of the industry and instill a user-interest-first principle in crypto projects, we explore several ideas and share insights as extensions to our previous discussions outlined in the Tokenomics Deep Dive and GameFi Tokenomics Deep Dive reports. These exploratory ideas are not meant to be prescriptive; rather, they aim to stimulate discourse and assist in navigating the complex landscape of crypto-project development.

Specifically, we explore aspects of designing more sustainable tokenomics with the following aims:

- To protect crypto users' interests
- To onboard more web2.0 users into crypto
- To build a healthy community for all market participants
- To promote sustainable tokenomics design
- To promote a sustainable and healthy crypto industry

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3 Challenges of Tokenomics

There are a few common challenges of tokenomics:

- **High Inflation**: Low initial token circulation coupled with excessive attention may lead to an overly inflated fully diluted valuation ("FDV") that may be unsustainable. Tokens of crypto projects with high inflation may experience substantial selling pressure. Furthermore, high token inflation may erode the purchasing power of the governance token, posing substantial risks to the project's long-term viability and success.

- **Low Capital Efficiency**: Crypto projects may experience low capital efficiency as a result of incurring higher expenditures or providing excessive token incentives, and yielding fewer economic returns than anticipated.

- **Conflict of Interests**: Despite the transparency of blockchains, situations exist where project team members may sell tokens under the guise of supporting project operations or development when in reality, they could be diverting treasury funds or project revenue to their own pockets or those of affiliates. Such actions are extremely detrimental to token holders.

- **Abuse of Treasury Funds**: While treasury fund management is supposedly governed by DAOs, abuse of treasury funds is still possible especially when centralized governance exists, or when the governance process is defective.

- **Low Floating Amount**: The floating amount of tokens refers to the amount that is in circulation and traded on the secondary market. Tokens held by the team or in the treasury that are unlocked but not circulating on any exchanges are not considered to be part of the floating amount. A token with a particularly low float may be prone to price manipulation.

- **Lack of Value Accrual**: Governance-only tokens do not create a significant amount of real value to token holders in most instances. A lack of value accrual can be attributed to flawed business models, a poor token design, among other factors. If a token doesn't accrue value or demonstrate utility, it may erode the trust and belief of its holder community over time.

- **TGE before Product**: As part of their marketing strategy, some crypto projects may have a token generation event before the launch of their product to generate attention. However, it may be difficult for investors to discern if a token is worth the investment without a tangible product and more information.

4 Considerations for Tokenomics Design

We have compiled a set of general practices observed in various successful tokenomics designs and highlighted several key considerations from the perspectives of **Token Allocation, Token Vesting Schedule, Maximum Inflation** and **Value Accrual** in this section.

4.1 Token Allocation

Crypto projects usually reserve their governance tokens for different parties and uses. A typical token allocation includes tokens reserved for **Team**, **Investors & Advisors**, **Treasury**, **Ecosystem** and **others.**

Figure 1: Generic example of token allocation and their related parties

Source: Binance Research

There has been increasing focus on aligning the interests of project teams with those of token holders. Here, we highlight two design considerations that have been undertaken by some projects.

A. Defining treasury fund purposes and rules of use to align the interests of project team and token holders

An interesting development in token allocation relates to the division of treasury tokens into two parts, **Long-term Treasury Fund (LTF)** and **Short-term Growth Fund (SGF)**, both under DAO governance and management but with the following difference:

- **Long-term Treasury Fund (LTF)**
  - Intention: For long-term operation and sustainable growth
  - Management: DAO governance
  - Uses:
    - To participate in the ecosystem through methods like staking to share rewards and benefits from the project after tokens are vested, with no governance rights
  - Others:
    - Non-spendable
    - Not in circulation at any moment
    - The rewards generated can be used for the long-term operation and sustainable growth of the project
- **Short-term Growth Fund (SGF)**
  - Intention: For short-term protocol growth support such as cold start, growth incentives, marketing events, bootstrapping on-chain liquidity and so forth
  - Management: DAO governance
  - Uses:
    - Incentives such as liquidity mining rewards
    - Marketing and promotion events
    - Liquidity
    - Other short-term use of funds for protocol development
  - Others:
    - Spendable
    - Will be in circulation when it's vested and disbursed

The **key differences** between **Long-term Treasury Fund (LTF)** and **Short-term Growth Fund (SGF)** lie in their:

- **Time Horizon and Use Cases:** Tokens in the LTF are locked in perpetuity and are used to extract staking rewards or other intrinsic benefits after they are vested. Tokens in the SGF are used for operational expenditures, token reward distribution and other operational requirements.
- **Circulating Supply:** Given that tokens in the LTF are not spent or sold to investors or any other parties, they will never be in circulation on the secondary trading market. On the other hand, tokens in the SGF will be in circulation when the fund is vested and disbursed for various reasons.

There are several **reasons** for doing so:

- To differentiate between the treasury fund intended for protocol development and a fund that should never be sold or spent
- To set a clear budget and expected use cases
- To prevent project teams from selling tokens from the treasury without community consent
- To align the project team's interest with all other token holders. In practice, this could mean using the LTF to participate in the staking module alongside other token holders for reward and benefit sharing
- To allow for more public scrutiny and comparison, which sets a precedent and promotes an industry standard for transparency

Instead of selling tokens from the Long-term Treasury Fund for project expenditure, the Short-term Growth Fund can be used to fulfill such expenses. The LTF can be used in other ways to generate additional cash flow such as by participating in staking to receive staking rewards.

Other possible use cases for the LTF include **token buyback and burn programs,** under the condition that the percentage of Long-term Treasury Fund shares in relation to the total supply remains the same before and after the token buyback and burn. For example, if LTF accounts for 30% out of the initial total supply, and 10% of the total supply has been set to be bought back and burnt, 30%*10% = 3% in the LTF can be used for buyback and burn programs, as the rest left in the LTF (30% - 3% = 27%) remains 30% of the total supply after burning 27% / (100% - 10%) = 30%. Token buyback and burn programs can either be preplanned by the project team or proposed at a later time through DAO governance.

B. Maintaining a balanced token allocation to achieve decentralized governance and organic project growth

A balanced token allocation refers to a tokenomics model that distributes tokens fairly to all contributors, and one that keeps both decentralization and competition of token holders on a healthy level, stimulating organic growth within the ecosystem.

Decentralized governance is protected by decentralized distribution of tokens to a certain extent. A unique characteristic of the crypto industry is that, project users, investors, project teams, liquidity providers (in some cases), market makers (in some cases) can all be token holders at the same time, and the governance power of each party is proportional to the vote-escrowed amount. This is unlike the traditional finance industry where a company's strategic decisions are mainly made by the board and the management team. This key difference underlines the importance of balanced token distribution to DAO governance, as the entity with the most tokens possesses the most governance power.

Decentralization of DAO governance may be undermined if a single party has a high concentration of token holdings. This may further discourage other parties from contributing to and participating in the project.

A balanced token distribution also helps prevent sybil attacks and maintain price stability. In an extreme case where a project heavily rewards early participants to stimulate initial growth, the token may face substantial selling pressure later on, and could attract numerous bots at the expense of real users. Allocating a certain amount of token allocation for market makers and as liquidity provider incentives can also help bootstrap and maintain token liquidity on the secondary market.

With that being said, no “one-size-fits-all” token allocation exists for all crypto projects. Every project should tailor their token allocation plan to match its unique internal economic system.

4.2 Token Vesting Schedule

A token vesting schedule can play a critical role in the token price volatility and long-term sustainability of a project. A long cliff time and vesting schedule for team members, investors, and advisors demonstrates their confidence in and commitment to building a project for the long-term. Additionally, vesting token rewards over an extended period can also facilitate sustainable growth.

4.3 Maximum Inflation

Managing inflation in both crypto and in the TradFi industry is undoubtedly a delicate issue. A high inflation rate can cause price volatility and disrupt a project’s internal economic cycles. On the other hand, a low inflation rate risks constraining a project's growth, given that token incentives or ecosystem support could be limited. Having a healthy inflation rate can be beneficial to token holders, projects, investors and other market participants alike.

It is worth-mentioning that the inflation rate is influenced by both the token allocation and the vesting schedule.

Given its direct relationship with a token’s supply and therefore, its influence on a token’s price over time, **Maximum Inflation** is a key metric to consider. One can consider “Maximum Inflation” in crypto tokenomics to be:

$$Maximum\ Inflation\ =\ Maximum\ Token\ Amount\ to\ be\ Unlocked \div Initial\ Circulating\ Supply$$

$$=\ (100\%\ -\ Long\ Term\ Treasury\ Fund\ -\ Initial\ Circulating\ Supply) \div Initial\ Circulating\ Supply$$

Given that tokens in the LTF are not intended to be in circulation as stated in Section 4.1, Maximum Inflation can be adjusted by tweaking a token's Initial Circulating Supply and/or the amount allocated to the Long-term Treasury Fund.

We understand that there are different types of projects, and therefore the benchmark of Maximum Inflation rate of crypto tokenomics is difficult to define. Based on our observation and analysis,

- Projects with a relatively low Initial Circulating Supply and consequently a high Maximum Inflation can mitigate the negative price pressures by allocating more funds to the Long-Term Treasury Fund.
- Projects with a relatively high Initial Circulating Supply and consequently a low Maximum Inflation may be susceptible to low traction due to limited token incentives. In this case, projects may develop growth and marketing strategies by harnessing the power of a strong ecosystem and/or utilizing launchpads to capture market attention and draw more resources.

4.4 Value Accrual

Token value accrual is another crucial pillar for tokenomics. While many meme coins without token utility have managed to gain significant market traction and have contributed to strong market activity, it is undeniable that having strong token utility is a healthy development for the ecosystem. Additionally, having more utility and ensuring value accrual to tokens is critical to onboarding more new users to the crypto industry. These traits contribute to sustainable growth over the long-term.

If we have more crypto projects with good business models as well as value accrual systems, we may see a more healthy industry with much more real value to all market participants.

5 Closing Thoughts

Tokenomics is and will always be an important subject in the cryptocurrency and blockchain industry. As the industry matures, sustainable tokenomics will be a hard requirement rather than a good-to-have by investors.

Other than tokenomics design, there are several other considerations that are out of the scope of this report, but would contribute to a healthier ecosystem.

- **Minimum Viable Product before TGE**: It would be reasonable to release a Minimum Viable Product ("MVP") and achieve some decent product traction before TGE. This approach would allow for a better understanding of the product offering, and help build community trust.
- **Regular Financial Reporting**. Practicing regular financial reporting might echo traditional finance strategies, but it's an effective technique to oversee financial conditions and adjust tokenomics as necessary. Additionally, it facilitates improved public oversight and transparency.
- **Build a Real Community**. Tokens can be considered as a novel instrument to help create a real community of users. Establishing strong consensus and trust around a project can be a challenging task — it's not built in a day, yet it's also not easily broken. A strong community can help projects to survive tough times and rejuvenate the token economy.

We welcome and appreciate any feedback on this report, as well as general comments on tokenomics. Together, we look forward to a stronger crypto industry with better tokenomics design in the future.

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