Votemarket v2

StakeDAO Association

November 2024

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1 Introduction

Since Andre Cronje's introduction of "vote incentives" (formerly known as "bribes") in 2021, this space has witnessed remarkable innovation. Today, vote incentive mechanisms have become a cornerstone strategy for numerous protocols, particularly in stablecoin and liquid staking platforms that seek to enhance their liquidity depth.

The evolution of vote incentive solutions has been driven by projects striving to improve both efficiency and user experience. Votemarket v2 represents the culmination of this evolution, offering unprecedented user flexibility while maintaining its core principles of on-chain execution and permissionless architecture. Moreover, it extends beyond traditional vote incentives to become a comprehensive platform where protocols can implement sophisticated liquidity incentivization strategies, including decentralized vote incentives, liquidity mining, and point-based incentive systems.

2 Understanding vote-incentives

In protocols employing governance tokens while maintaining decentralization, reward allocation typically requires governance votes. This is particularly evident in protocols that have adopted "ve-tokenomics," inspired by Curve Finance. In this framework, each vote directs a specific token allocation over a defined period, creating inherent financial value. This value proposition makes votes attractive to various stakeholders, such as pool deployers, who can acquire them indirectly through vote incentive platforms by rewarding governance token holders for aligned voting.

Protocols with active vote incentive markets include notably Curve Finance, Balancer, Frax, FX Protocol, etc.

Note: Participation in vote incentives involves financial risk, and rew//ards are not guaranteed. Users should be aware of these risks before participating..

3 Current state of the art

3.1 The on-chain v/s off-chain paradigm

Vote incentive marketplaces currently operate in two distinct modalities: off-chain distribution systems and on-chain distribution. The benefits of fully on-chain vote

incentive contracts mirror the broader advantages of blockchain technology over traditional finance. First, voters operate independently of centralized distribution parties. Second, automated distribution eliminates the possibility of computational errors. The distribution executes automatically at the round's conclusion, eliminating the need for script execution, calculation verification, team checks, or merkle airdrop updates. Finally, users benefit from complete transparency and verification capabilities.

However, on-chain distribution faces certain limitations, explaining why many vote-incentive protocols opt for off-chain solutions. The primary challenge lies in gauge controller contracts typically not storing historic votes and weights, requiring voters to claim incentives every round or risk losing them. This necessitates gas costs and constant attention from voters.

Furthermore, for several protocols including Curve, Pancakeswap, Balancer, Pendle, etc. the largest voters are actually protocols passing on voting power to their token holders via off-chain votes (Convex, Cakepie, Aura, Penpie, etc.). By nature, an on-chain vote-incentive platform cannot distribute vote-incentives related to an off-chain vote, failing to address a significant portion of their market.

On-chain vote-incentive platforms include Votemarket, bribe.crv.finance, yBribe. Vote-incentive platforms with off-chain distribution include notably Votium, Hidden Hand, and Quest.

3.2 Evolving from initial models

The original vote incentive platform, bribe.crv.finance, implemented a straightforward approach: incentivisers deposited rewards with only the gauge address as a parameter. During the post-voting period, voters could claim rewards proportional to their voting share, with unclaimed amounts rolling over to the next period.

Beyond addressing weekly claim requirements solved by off-chain solutions, Votemarket's first iteration resolved several key limitations:

- By adding the possibility to **blacklist** certain addresses, incentivisers do not need to choose anymore between voting with their own voting power or incentivising other voters. They can do both at the same time and avoid sending most of the incentives to themselves. They can also blacklist a wrapper protocol (e.g. Convex) to be able to deposit a second incentive directly for the holders of this protocol.

- Voters have a cool-down on their vote, which in some cases prevents them from voting every week. By setting a **minimum incentive duration**, Votemarket guaranteed to voters that they will get their fair rewards.

- Votemarket also allowed protocols to create **long term programs** by setting incentive campaigns of several weeks, and also giving the possibility to deploy a contract that would automatically deposit or update incentive campaigns for the incentiviser. This is particularly interesting for decentralized protocols who dislike the need of frequent transactions.

- Just like for liquidity incentives, the amount of rewards voters obtain is not a linear function of the amount of votes they cast. For example, in an extreme case, if there is only one voter, he will get the exact same reward if he uses one vote or several votes. In other words, the incremental reward per vote is nil,

and for the incentiviser, the incremental price of the second vote is infinite. This is true also with several voters: as a voter, the bigger your share of total votes, the lower the incremental value of any additional vote. To protect incentivisers from having voters taking advantage of this effect, Votemarket put in place a **maximum price per vote**, that the incentiviser has to set when launching a campaign.

- To avoid campaigns lasting forever with unclaimed funds being rolled over until every voter claims them, Votemarket allows the incentiviser to **close a campaign** once its claiming period is over. It also allows to **update a campaign**, by increasing its size, its duration, its maximum price per vote, etc.
- Votemarket also allows incentivisers to deposit their incentives on a **different chain** than the chain of voting, such as Arbitrum, Base, Optimism, Polygon...

These innovations substantially enhanced user experience for both incentivisers and voters, and quickly, all other vote-incentive platforms included similar features.

4 Votemarket v2, the next generation of vote-incentives

Votemarket v2 represents the next evolutionary step in vote-incentive platforms. It resolves the on-chain vs. off-chain dilemma by implementing an on-chain solution for reward distribution without weekly claims. Additionally, it enables decentralized incentivization of wrapper governance token voters (such as vlCVX holders) through off-chain mechanisms.

More importantly, Votemarket v2 will go beyond vote-incentives and become the go-to place for efficient liquidity mining programs for projects with voted-upon reward allocation.

To sum it up, here is what Votemarket v2 brings to the table:

1. Voters can **claim whenever they want**.
2. Incentivisers can **reach the full vote supply** with one incentive campaign.
3. Unspent incentives can be automatically **directed to another incentive strategy** according to terms defined by the depositor (e.g. direct liquidity mining).

4.1 Multi-week reward distribution

As mentioned above, the main hurdle to an on-chain platform which would allow voters to claim whenever they want is that, to avoid being reliant on specific architectures of underlying protocols, it needs to adapt to gauge controller contracts which do not store historical data. For this, the platform would need to either store such data or rebuild it, but both options would be even more gas-expensive than claiming every week, which makes it unrealistic for mainnet platforms.

Votemarket v2 brings a new solution to this problem. To put it in a nutshell, the gas-heavy part is brought on a layer 2, even though both the incentiviser and the voter are on mainnet.

The flow is as follows:

1. Bob creates an eight-week vote incentive campaign with his reward tokens.
2. Receipt (wrapped) tokens are minted on L2 to mirror the real reward tokens.
3. Alice votes on mainnet for the gauge incentivised by Bob

4. After the rollover happened (a transaction that occurs at the first interaction with the platform contract when a new period starts), a blockhash is bridged in a decentralised manner to the Layer 2. It will allow the Verifier module to check that the claimable amount of each user is correct when they claim.

5. After eight weeks, Alice seemlessly claims the receipt token and burns it, which unlocks for her the corresponding amount of reward token.

This cross-chain architecture is facilitated by the "LaPoste" contract using Chainlink's CCIP technology.

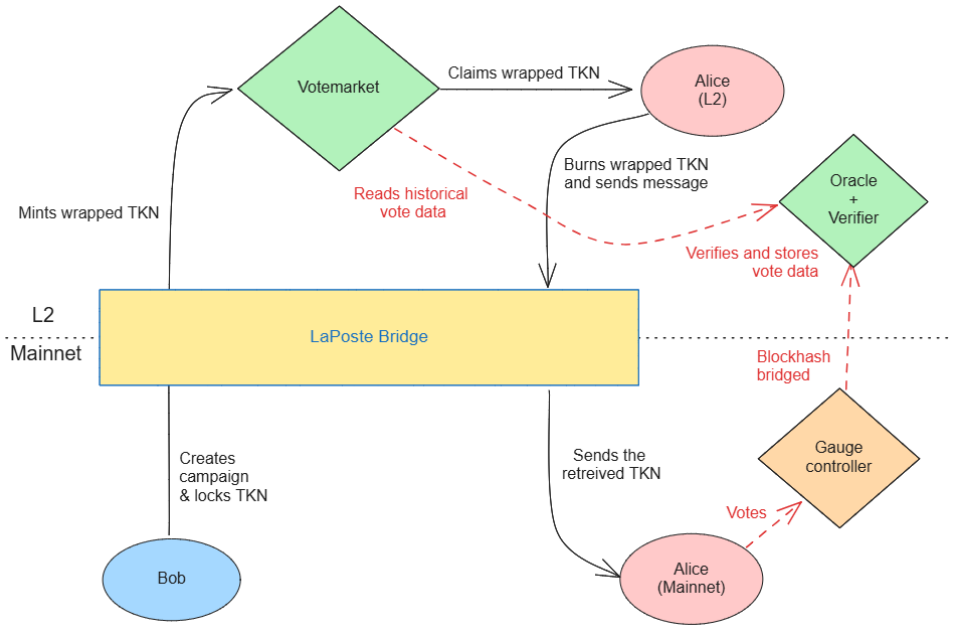

Figure 1: Votemarket v2 reward flow

In our example, thanks to this architecture, Alice exchanged the gas of eight claims with the gas of one message bridged, so she saved more than 60% in gas. But if there were several campaigns with the same reward token, only one bridge would be necessary, increasing savings further. It also goes without saying that the longer the campaign lasts, the larger the gas savings for Alice (not even mentioning the attention required to not miss any claim).

4.2 Full Vote Supply Coverage

Votemarket v2 provides a holistic solution for both direct voters and protocol voters. Taking Curve as an example: the total vote supply is split between direct CRV holders (50%) and protocol-controlled votes like Convex (50%).

The platform elegantly handles both scenarios:

- Direct CRV holders receive their rewards through on-chain computation and distribution
- For protocol voters (e.g., vlCVX holders), the protocol's claimable rewards are automatically directed to a designated address for efficient off-chain distribution via Merkle airdrops

This hybrid approach ensures complete vote supply coverage through a single incentive campaign.

This functionality is a sort of off-chain plug-in on top of Votemarket v2's core infrastructure, which stays fully on-chain. It is addressed to users who already vote off-chain.

4.3 Fallback strategies

Votemarket v2 transcends traditional vote incentive marketplaces by introducing intelligent fallback strategies. The leverage effect of vote incentives, which allows depositors to multiply their deposits by a factor, makes vote incentives the most efficient incentivization strategy up to a certain point where efficiency becomes too low. Beyond this point, unspent rewards (due to maximum price-per-vote protection) can be, on the depositor's decision, automatically and transparently redirected to alternative strategies instead of rolling over to the next period.

Key Implementation Examples:

- **Fixed Weekly Distribution** : A protocol allocates weekly tokens to liquidity pool via vote incentives. Unspent rewards convert to direct liquidity mining. Ensures full reward distribution while maximizing vote leverage. This feature was first introduced by Paladin in their most recent update
- **Revenue Sharing** : Trading fees distributed first as vote incentives. Excess automatically converts to locking rewards. Similar to Curve's proposed model and Balancer's implementation.

This flexible architecture enables protocols to optimize their incentive strategies across multiple distribution methods, ensuring maximum efficiency for every reward token.

4.4 Point-based vote-incentives

Thanks to its factory, Votemarket v2 is able to create token wrappers even for off-chain points systems. That means that projects can start using vote-incentives before their TGE, or in general with their point system. This would be on-chain incentivisation with points, increasing massively the user experience.

5 Security and compliance

- Votemarket v2 contracts have been audited by Trust Security.
- LaPoste contracts have been audited by Pashov Audit Group.

Audit reports are available in Stake DAO's documentation. Though these audits increase security, users should understand that no system can guarantee complete protection against risks or vulnerabilities.

We encourage all users to perform their own due diligence before participating in vote incentives on Votemarket v2. Blockchain technology and DeFi platforms are experimental and carry inherent risks, including potential loss of funds or rewards. Users participate at their own discretion and risk.

Users are also encouraged to stay informed of any regulatory changes that may affect their participation. Votemarket v2 does not guarantee compliance with every jurisdiction's laws and advises users to consult local regulations and legal advisors

6 Intellectual property

Votemarket v2's code and smart contracts are open-source and licensed under the Business Source License (BSL). This license protects the code until the earlier of January 1, 2027, or a date specified at v2-votemarket-license-date.stakedao.eth. Before this date, any party intending to fork or copy all or parts of Votemarket v2's code or contracts must obtain prior permission from StakeDAO Association. Interested parties should contact us via contact@stakedao.org to discuss the terms and conditions for potential use.