

JOE Token Staking V2

TLDR

We introduce new JOE token staking designed to offer different benefits for a variety of users.

- Stake JOE to sJOE and receive platform revenue share, in USD stables.
- Stake JOE to rJOE and receive allocation credit for new token launches.
- Stake JOE to veJOE and receive farm boost (up to 2.5X) in selected farms.
- veJOE get voting power for future governance
- xJOE will be deprecated
 - Or we keep it for JOE stakers to earn more JOE via emissions

Hypothesis

- **Modular Design:** By offering separate staking pools with different benefits, we can increase our number of stakers by appealing to more user groups.
- **Claim rewards without unstaking:** By allowing users to claim reward benefits without having to unstake we can improve staking retention.
- **Incentivize yield farmers:** By allowing users to boost farm yields, we create competition among yield farmers to increase staking.

veJOE: Boost your farming rewards

Gain more JOE without locking or fees

vePTP was well received for its incentivizing yield farmers to stake to receive more emissions. Although this mechanism distributes more emissions towards large mercenary yield farmers, it would be an improvement for current JOE tokenomics in following ways:

1. Encourages yield farmers and yield aggregators to stake some JOE to optimize farming returns.
2. Cap and boost warm-ups shift distribution towards longer-term stakers, adding time friction for reward selling.
3. Rewards loyal JOE stakers by boosting their yield farming returns.

Staking

We propose the following:

- JOE holders can stake JOE to the veJOE vault, and claim veJOE tokens in real time, similar to a yield farm.
 - Receive veJOE tokens at a fixed generation rate, up to a cap of 100X their JOE staked.
 - veJOE generation rate may be boosted +100% for 15 days, by depositing 5% of staked JOE balance
- veJOE is non-transferrable, only burn and minting are allowed.
- veJOE holders may unstake JOE any time, but loses all veJOE.

In the future, veJOE holders would be conferred voting escrow rights, for governance of a specific budget and scope:

- A specified budget, e.g. 30% of farm emissions
- Allocation of the budget to be shared among AVAX-Stablecoin liquidity pools only, e.g. AVAX-USDC or AVAX-FRAX

Farm Boosting

- veJOE holders can increase their JOE yield farming rewards by up to +150% (2.5X).
- User JOE farming multiplier = $1 + (\text{userVeJoe} / \text{totalVeJoe}) * 1.5$
 - `userVeJoe` balance is measured at the time of deposit to farm or last harvest.
 - `totalVeJoe` balance of the farm is the sum of all `userVeJoe` of participating users in farm, and is updated when `userVeJoe` is also updated.
- Users may only receive farming boost from eligible farms. E.g:

- AVAX-USDT.e
- AVAX-USDC.e
- AVAX-DAI.e
- AVAX-MIM
- AVAX-WETH.e
- AVAX-WBTC.e
- USDC-USDC.e
- USDT-USDT.e
- AVAX-JOE

Examples

	veJOE	LP tokens	Multiplier	Weighted LP	Adj. Pool Share	Joe Per Sec
Alice	100	1000	2.5	2500	50%	0.5
Bob	0	2500	0	2500	50%	0.5
Total	0	3500		5000	100%	1.0

	veJOE	LP tokens	Multiplier	Weighted LP	Adj. Pool Share	Joe Per Sec
Alice	100	1000	1.14	1136	32.4%	0.324
Bob	1000	1000	2.36	2363	67.5%	0.675
Total	1100	2000		3499	100%	1.0

	veJOE	LP tokens	Multiplier	Weighted LP	Adj. Pool Share	Joe Per Sec
Alice	100	1000	1.5	1500	33.3%	0.333
Bob	200	1000	2	2000	44.4%	0.444
Chris	0	1000	1	1000	22.2%	0.222
Total	300	3000		4500	100%	1.0

	veJOE	LP tokens	Multiplier	Weighted LP	Adj. Pool Share	Joe Per Sec
Alice	100	1000	1.5	1500	25%	0.25

	veJOE	LP tokens	Multiplier	Weighted LP	Adj. Pool Share	Joe Per Sec
Bob	200	1000	2	2000	33.3%	0.333
Chris	0	2500	1	2500	41.6%	0.416
Total	300	4500		6000	100%	1.0

rJOE: Earn Rocket Joe Tokens

Rocket Joe Tokens

Rocket Joe is a new liquidity launch protocol that enables price discovery and liquidity bootstrap for new token launches. While Rocket Joe is a permission-less protocol, our platform may promote curated launch events with limited supply of issuing tokens.

We introduce an additional *rJOE* token used to determine allocation credit for participants, so that the Rocket Joe platform activity has direct benefit to *JOE* token holders.

The *rJOE* token design allows smaller participants to acquire the same allocation credit as larger participants that have staked in shorter periods of time. The introduction of a non-transferable token is also friendly to new users, which increases *JOE* token holder growth.

Design

We propose the following:

- *JOE* holders can stake *JOE* to the *rJOE* vault, and claim *rJOE* tokens in real time, similar to a yield farm.
- **rJOE is a non-traded ERC20 token with infinite supply.**
 - It is emitted by the *rJOE* vault, with emission rate controlled by the protocol.
 - *rJOE* tokens are burned by users to receive allocation credit for each launch event.
 - The price of allocation credit may be set per launch event; in Q1 2022 we will set price of 100 *rJOE* for 1 AVAX allocation credit.
- *rJOE* stakers receive *rJOE* tokens proportional to their share of the *rJOE* vault.

- $\text{userRewardRate} = \text{userJoe} / \text{totalJoe} * \text{rJoeRewardRate}$.

sJOE: Earn platform revenue share

Improving U/X

We propose to pay revenue sharing in USD stablecoins, claimable in real time like a yield farm. This improves user experience in the following ways:

- Participants have more certainty as platform revenues and rewards are denoted in stable coins.
- Participants can claim rewards without needing to unstake.

Design

We propose the following:

- *JOE* holders can stake *JOE* to the *sJOE* vault, and claim *USDC (TBC)* tokens in real-time, similar to a yield farm.
- *sJOE* vault receives *USDC* from platform revenues and fees.
 - Scope includes trading fees and *sJOE* deposit fees. It may in future include platform fees e.g. other vault withdrawal fees.
 - The vault will distribute tokens daily over 24hours.
 - E.g. last day revenue is 200,000 *USDC* then reward rate is $200000 / 86400 = 2.3148$ *USDC* per sec
 - The reward rate will be controlled by protocol; over time we will automate this so that revenue distribution automatically sets the reward rate.
- *sJOE* stakers receive rewards proportional to their share of the *sJOE* vault.
 - $\text{userRewardRate} = \text{userJoe} / \text{totalJoe} * \text{sJoeRewardRate}$.
- 0-3% Deposit fee, which increases as staked *JOE* increases
 - The fee is paid to the rest of *sJOE* participants. It is designed to reduce over-saturation of the *sJOE* vault.

- For later participants that join the sJOE vault, they would need to stake in the sJOE vault to break even.

Collateralization

In Nov 2021, we introduced xJOE collateralization, where xJOE stakers can borrow against their xJOE collateral. This was a useful feature for some xJOE stakers that may wish to invest in other tokens without additional capital.

However, we observed that the adoption is relatively low:

- xJOE lending and xJOE farm maintained the same APR, indicating that the market favored yield benefits of xJOE lending over collateralization.
- As xJOE lending rewards were reduced, xJOE deposits also reduced significantly, suggesting that most lenders were not in fact borrowing against the collateral.

We propose:

- Allow JOE to be collateralizable.
- veJOE, sJOE and rJOE don't have receipt tokens and thus are not collateralizable.

Appendix

Protocol Owned Liquidity (POL)

A staple of DeFi token liquidity has been for protocols to provide incentives for market participants to provide liquidity for e.g. *JOE-AVAX*. This incentive mechanism allows for token distribution as well as a lever to manage liquidity depth, but faces sustainability issues as incentives run out. A newer mechanism, *Protocol-Owned Liquidity (POL)* popularized by *Olympus* addresses sustainability issues by allowing protocol treasuries to provide a substantial portion of liquidity depth.

ve(3,3)

A recent [blogpost](#) by Andre Cronje proposed to combine game theory elements with voting escrow token mechanism by allowing emission share to be increased as share of staked tokens increases. This additional design combines Nash equilibrium concept popularized by Olympus Dao.

xJOE revenue share staking

Users pay 0.30% fee for trading on Trader Joe, of which 0.25% is paid to liquidity providers, and 0.05% is paid to the platform. The fee is paid as LP tokens. The xJOE mechanism, which was first popularized by xSUSHI, converts the LP tokens to AVAX and then used to buy back JOE tokens from open market, and then sent to xJOE pool. This allows xJOE stakers to receive more JOE, with APR based on platform trading revenues.

This mechanism is gas-efficient for Ethereum users as they can stake once and accrue rewards. However, on Avalanche which has cheap and fast transactions, we observe that yield farms are more intuitive and allow users to claim rewards in real time. Our experiments show many users are not able to distinguish between staking and yield farms and are often confused about where to find their staking rewards.

Voting Escrow

Popularized by Curve, token holders that stake their tokens receive voting escrow tokens (e.g. veCRV). Voting escrow allows stakers to participate in protocol governance, such as the voting on adjustment of protocol incentives.

To date, Trader Joe has not yet opened governance as the voting escrow mechanism may be highly profitable for protocols to influence, resulting in uncompetitive allocation of token incentives.