

Marketing Communication

Introduction to SOL Staking

Solana in a Nutshell

On the Solana network, many different people and entities run a program on specialized computers known as validators. Validators play a key role in maintaining and securing the Solana blockchain. Validators are responsible for processing and executing new transactions on the network, as well as for voting on and appending new blocks to the blockchain.

As different validators around the world may receive different pieces of information at different times, it is essential that the network is able to come to agreement about which transactions and data are continually added to the blockchain. The strategy by which the validators and the entire network come to this agreement is known as the consensus mechanism, and is a core challenge to building a successful decentralized blockchain network. Many different projects have attempted various solutions on how to reach consensus in a fast and cost-efficient manner.

The Solana network uses a Delegated-Proof-of-Stake consensus mechanism (often abbreviated to DPoS) as opposed to Ethereum's Proof-of-Stake (PoS). Every validator on the network has an opportunity to participate in consensus by casting votes for which blocks they believe should be added to the blockchain, thereby confirming any valid transactions contained in those particular blocks. However, not all validator's votes are weighted equally. Delegators play a vital role in deciding the importance of a validator and its likelihood to be chosen to add a block. Delegators delegate their SOL to one or multiple validators and earn rewards directly from those validators in a permissionless fashion. Validators earn commissions on the rewards generated by the SOL delegated to that validator.

1. Validators set up their voting account.
2. Delegators delegate their SOL to that voting account
3. Validators are chosen to create new blocks and validate transactions based on a combination of factors, including the amount of SOL delegated to them and a random or deterministic selection process.
4. Validators who successfully validate transactions and create new blocks are rewarded with transaction fees and newly minted cryptocurrency.
5. Validators who behave maliciously or try to attack the network risk losing their delegated SOL as a form of punishment. While this is currently not implemented in Solana, it is subject to change.
6. Delegators can at any point undelegated or switch to another validator. This is subject to the total stake state change of the network but generally such change takes place within 1 epoch (2-3 days).

What are the Benefits of Staking?

Staking is the use of capital at risk in the form of locked tokens to secure the network, earn yield for providing your resource. The delegated tokens represent a vote that contributes in distributed consensus and execution of transactions.

- Earn passive income through the VanEck Solana ETN
- Access to staking yield with a product that trades like an ETF
- Contribute to the network's security, a win-win for the investor and the decentralized community

Risks of Staking

Despite potential benefits pointed out above, there are some risks related to staking crypto assets. First of all, it is common for users to "vest" or lock up their crypto assets for a specified amount of time under staking terms, meaning they can't withdraw or transfer their assets during this timeframe, even if they need access right away. As a result, investors cannot take advantage of price gains if there are positive moves in prices during the vesting period.

Additionally, in a short period of time, a crypto asset may experience severe market volatility, which could have an effect on the rewards from staking. Therefore, a decline in the price of a coin that you are staking can have a drastic effect on the rewards that you receive from staking, and profits obtained through staking may be countered if the value of the coin drops drastically. Crypto asset bear markets can be considered disadvantageous because they are sustained for such a long period of time. While Slashing is currently not a substantial risk on Solana as it requires a manual proposal and supermajority vote from the validators, slashing risk in proof-of-stake (PoS) blockchains involves penalties imposed on validators for malicious or faulty behavior. Validators stake crypto assets to participate in consensus. If they breach network rules intentionally or unintentionally, they can lose some staked assets. Scenarios triggering slashing include double signing conflicting blocks, prolonged downtime, Byzantine actions, collusion, and validating invalid data. Penalties vary based on protocols and might include seizing part of the staked funds or temporary suspension. Slashing deters dishonesty and ensures network security by aligning validators' incentives with the blockchain's integrity. Slashing may in some cases result in total loss of staked funds, rewards or a combination thereof. Lastly, staking may result in total loss of funds due to smart contract risk, exploits or bugs in the protocol, or hard forks. Self-custody of staked crypto assets does not circumvent these risks.

Investing in crypto asset can generate passive income by staking them to secure the Blockchain, which provides passive income to their holders. Nonetheless, delayed delivery may cause rewards made by the network to take a while to reach investors. Therefore, peak traffic on a blockchain network results in delays, a congestion of transactions, and higher transaction fees because demand exceeds supply and network validators can choose which transactions to process. Hence, payouts and re-investment can be delayed. For individuals relying on crypto asset rewards as a source of income or passive earnings, delays can create financial uncertainty. If rewards are delayed for an extended period, it can disrupt cash flow and affect individuals' financial planning. This is particularly relevant for users who depend on regular rewards for living expenses or other financial obligations. The unpredictability of reward delays can make it challenging for individuals to effectively manage their finances.

How does Staking work in Practice for the VanEck Solana ETN?

Staking is now enabled for the VanEck Solana ETN. What does this mean for you as investor and what do you need to do to earn additional rewards? Here are the key features of how staking is done through the VanEck Solana ETN.

- The staking methods we employ are fully non-custodial, that means that the Custodian of the ETNs assets remains in full control of the staked assets. There is no lending risk involved.
- Investors of the Solana ETN do not need to take any action, if rewards are paid out, they will be accounted for in the coin entitlement of the ETN. There is no difference whether you acquired the ETN last year or last week, the total staking rewards acquired during last timeframe will be equally distributed (minus the staking fee of 25%).
- Any staking rewards will be included in the end of day NAV on a daily basis with a cut-off point at 4pm CET.
- How does staking work in practice in case of the ETN?
 1. VanEck utilizes the Physical SOL held by the ETN for staking by instructing the custodian to delegate SOL to a validator. The validator node is owned and maintained by the staking provider, but control of the delegated SOL remains at the custodian. The control of the delegated SOL never leaves the cold storage of the custodian.
 2. Once successfully delegated to the validator node, the validator node receives inflationary rewards, MEV rewards and block rewards on epoch by epoch basis.
 3. The accrued rewards are reinvested (and sometimes also delegated again) into the note on a daily basis. The accrued rewards are reflected in the ETNs performance
 4. This process is repeated, scaled up or down depending on network and market circumstances to ensure the Solana ETN remains sufficiently redeemable on any given business day. We have processes and monitoring in place to manage the liquidity requirements of the ETN.

Frequently Asked Questions:

- Can I still buy and sell the ETN daily despite the lock-up of collateral?

Yes, the functionality of the ETN remains the same. You can still buy, sell and hold the ETN like any other exchange traded product.

- What is the typical staking reward for Solana?
The staking rewards depend on a number of factors that are out of our control such as the number of validators on the network and the demand for Solana transactions. The staking yield for Solana generally lies between 7 to 9% per annum. The inflationary reward follows a disinflation rate of 15% every year and its final value will be 1.5% after 15 years after protocol launch. Solana remains an innovative technology and staking comes with significant uncertainty and risk just like the technology itself.
- How do Solana ETN investors receive staking rewards?
Any staking rewards resulting from staking the collateral of the note, minus the staking fee of 25%, are included in the NAV at the end of each trading day.
- Does staking mean that any staked collateral is not in cold storage?
Generally, staking is non-custodial, meaning that access to the staked assets remain at the depositor. The wallets from which we deposit to validators remain in cold-storage, and therefore also the access to withdraw the staked assets and receive staking rewards.
- Is any of the SOL lend out?
No, VanEck does not lend out SOL.
- Do I need to pay any taxes on the staking rewards?
For an assessment of your taxation, please contact your tax advisor or consult your local tax authority for more information. This information does not constitute tax advice and cannot replace it.

Costs of Staking

Fees on staking rewards would be:

	Percent
Gross staking reward	100%
Staking Fees	-25%
Net staking reward*	75%

*This is the portion of the gross reward that may be included in the NAV of the ETN. Staking rewards are not guaranteed. Staking yield is not guaranteed.



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