

Maximize Crypto Rewards

ETP Crypto Staking
at 21Shares

September 2024

21shares®

Introduction

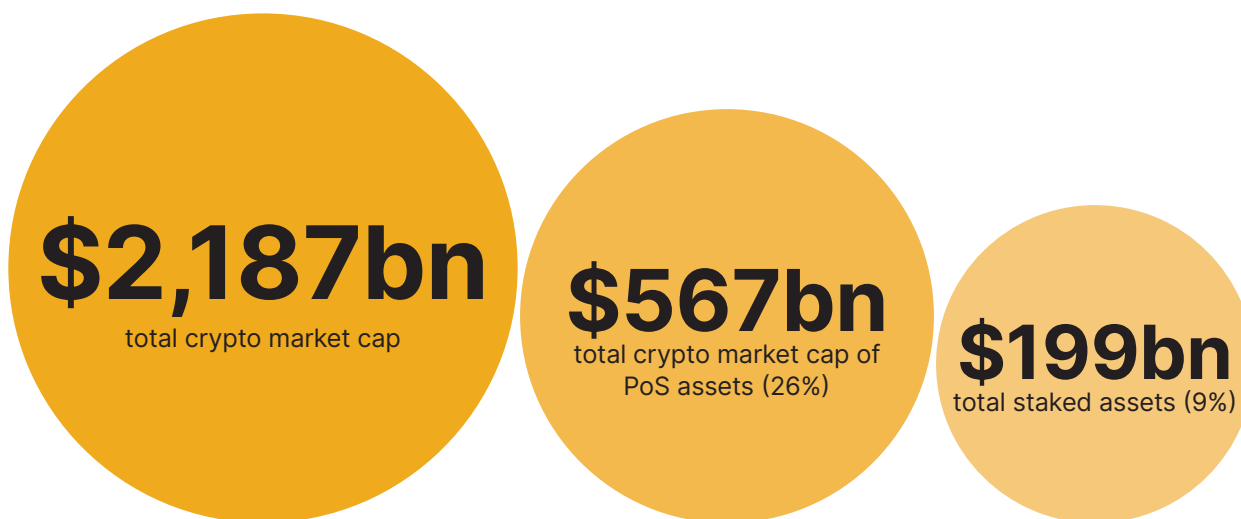
- Generating yield is a perennial challenge for investors. Traditional finance provides various yield-generating instruments, which have historically provided varying returns based on their risk/return profiles. Cryptocurrencies also offer a few possibilities to generate yield, and one of the most important is staking.
- Staking provides value for ETP investors by using the collateralized assets within the ETP to generate a yield, increasing the ETP performance. By investing in such professionally managed ETPs, investors can enjoy simple and liquid access to staking.
- This paper will outline the basics of crypto staking, how it works, its potential benefits for ETP investors, how the risks are mitigated, and 21Shares' unique approach to staking.

What is Staking

- Staking is a way for crypto holders to put the digital assets they hold to work and earn a passive income without selling them.
- Blockchain technology allows individuals to transact directly between users without the need for an intermediary such as a bank or another financial institution. A blockchain network has different validation methods to replace the role of the bank. Proof-of-Work protocols, such as Bitcoin, require mining to confirm a transaction. Alternatively, Proof-of-Stake protocols use staking as a consensus mechanism.
- In a Proof-of-Stake blockchain, a validator node is a participant responsible for validating transactions and creating new blocks in the blockchain. Validators are often selected based on the amount of cryptocurrency tokens that have been allocated to them. This method, known as stake-based selection, aims to incentivize validators to follow the consensus rules as their tokens can be slashed in case of malicious behavior. Validators with a larger stake have a higher probability of being selected to validate transactions and create new blocks, as they have more to lose if they engage in malicious behavior. In exchange, these validators will receive rewards, which are then distributed to the initial allocators.

How Big is Staking

- Staking has become a key component of the cryptocurrency ecosystem, as the Proof-of-Stake blockchains represent 26%* of the total market capitalization of all cryptocurrencies. Around \$200bn* worth of cryptocurrencies are currently staked. With an average yield of 5%* and a median one of 8%*, staking is a very strong opportunity for passive income generation. Around \$9bn* of staking rewards are now being generated every year.



*All data as of August 21st, 2024, sourced from stakingrewards.com and coingecko.com

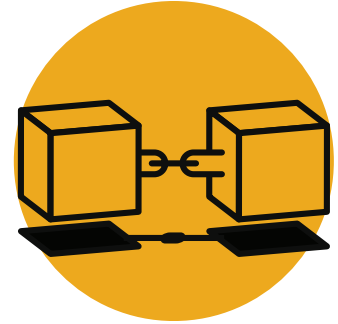
How 21Shares' Crypto Staking ETPs Work



21Shares makes crypto staking easy and reliable.



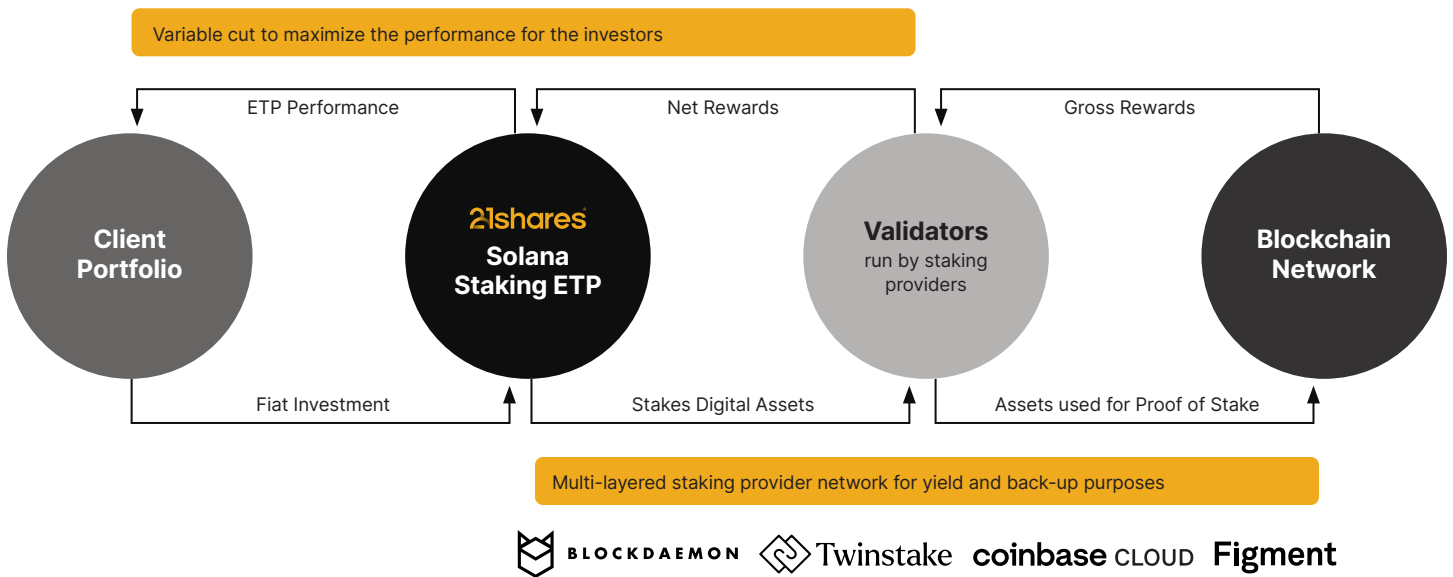
21Shares staking ETPs offer additional return through staking rewards earned by validating transactions on the underlying blockchain networks.



Investors in 21Shares staking ETPs enjoy proven daily liquidity, are not limited by staking lock-up periods, and do not need to manage their staked assets on-chain.

How does 21Shares ETP Crypto Staking work?

1. Clients invest in 21Shares' Staking ETPs, publicly-listed instruments widely available, with fiat currencies.
2. 21Shares either receives or acquires the equivalent amount of the underlying cryptocurrencies. ETPs are always 100% physically backed, holding these cryptocurrencies in custody.
3. 21Shares delegates a portion of the underlying assets of certain ETPs to validators run by institutional staking providers. The private keys of the custody vaults remain in cold storage during these delegations.
4. The staked assets are used to secure the network and generate rewards through this mechanism.
5. Staking rewards are accrued into the ETPs, increasing their respective performances, before being staked again to generate a compounding effect.



Risks and Limitations of Crypto Staking ETPs

As with any financial strategy, there are risks and limitations associated with staking crypto.

Liquidity Risk

- Most blockchain networks impose a waiting time before staked assets can be returned. This is known as the unbonding period or lock-up period. Depending on the protocol, this period can range from a few hours to as long as six months but remains around a few days on average. Once investors have made and taken the decision to unstake their assets, they must still wait until the end of the unbonding period to be able to move their assets and exit their positions.
- However, ETPs are - or at least should strive to be - liquid instruments that can be exited on any given day. So to maintain the liquidity of ETPs, it is conservative for the issuer to keep a relevant portion of the assets unstaked.
- The utilization rate, meaning the percentage of each cryptocurrency that is staked, will vary, with the most important factor being the cryptocurrency's lock-up period. Instead of having a fixed utilization rate for all its ETPs, 21Shares has developed a proprietary active management method for its staking allocations. After developing an in-house algorithmic model, 21Shares uses the lock-up period of each coin, historical redemption data, a product size analysis, and a qualitative framework to not only define the optimal utilization rate (percentage of ETP assets that are staked) but also to manage it proactively, anticipating market movements and offering liquidity at all time.
- 21Shares mitigates the slashing risk by working with top-tier institutional staking providers, with an excellent anti-slashing track record. 21Shares has never faced a single slashing event on any of its staking ETPs. Moreover, 21Shares has additional security layers in place, such as slashing insurance policies.
- curring slashing penalties, such issues can occur because of operational aspects of the staking process.
- 21Shares ETPs reduce the risk of slashing by employing professional staking platforms whose sole purpose is to stake assets and be able to cope with those operational challenges.

Counterparty Risk

- Any cryptocurrency holder can stake assets on a blockchain network directly by allocating their assets to a public validator. Institutional investors can also rely on an institutional provider offering their own validators. However, both methods require significant operational setup and oversight when done by the investors themselves.
- As mentioned, 21Shares only works with top-tier institutional staking providers, following rigorous in-depth due diligence processes and having agreements and insurance policies in place to protect the clients. Currently, 21Shares is using Coinbase Cloud, Fignment, Twinstake, and Blockdaemon and is also looking at onboarding additional providers

Slashing Risk

- Slashing is a penalty mechanism to discourage malicious or negligent behavior by network participants, such as downtime, double signing, or network manipulation. The penalty is a loss, either partial or full, of the staked coins, either burned or confiscated. It's specific to each protocol.

Why Use 21Shares' Staking ETPs

Simplicity, Security and Liquidity

- Investing in 21Shares' staking ETPs allows clients to gain both the underlying exposure and the staking rewards, all of this via a single regulated product, in a quick and simple way.
- Instead of staking by themselves, clients also benefit from the security of a battle-tested infrastructure, multi-year expertise, and a network of top-tier institutional staking providers.
- Lastly, these ETPs also offer constant liquidity, preventing the investors from worrying about bonding and lock-up periods, while being protected by a risk-averse, data-based "active staking" approach, validated as the "golden standard" by market makers.

Product Suite

Currently, 21Shares offers the following staking ETPs:

- 21Shares Solana Staking ETP (ASOL)
- 21Shares Tezos Staking ETP (AXTZ)
- 21Shares Ethereum Staking ETP (AETH)
- 21Shares Stacks Staking ETP (ASTX)
- 21Shares Celestia Staking ETP (ATIA)
- 21Shares Injective Staking ETP (AINJ)
- 21Shares Sui Staking ETP (ASUI)
- 21Shares Avalanche Staking ETP (AVAX)
- 21Shares Cosmos Staking ETP (ATOM)
- 21Shares Toncoin Staking ETP (TONN)
- 21Shares Staking Basket Index ETP (STAKE)

Differences Between Crypto Staking & Crypto Lending

- Staking and lending both involve using cryptocurrency to earn yields, but they are completely different ways of earning income. Staking is a crypto-native concept, while lending is a familiar concept in traditional finance.
- Staking is where users agree to pledge cryptocurrency to a blockchain network in order to facilitate the validation of transactions. Staking helps secure the network and, in turn, compensates those who stake with rewards.
- On the other hand, lending is where users agree to loan their cryptocurrency in return for interest payments, which compensates lenders for giving up the use of their assets for a certain period, as well as for the risk that they might not get paid back.
- Both concepts allow users to earn passive income, but the purpose, risks, and rewards are quite different.

	Staking	Lending
Purpose	Help secure the network by validating the transactions	Provide liquidity to borrowers
Mechanics	Allocate assets to validator nodes, locking up the tokens	Lend assets to institutional lending partners, often in exchange for high collateral requirements (100% or greater)
Yield	Staking rewards	Interest income
Risk	Slashing risk Liquidity risk through the unbonding period	Counterparty credit risk
Risk Mitigation	Slashing insurance coverage Daily liquidity through staking ETPs	Potential collateral requirements of minimum 100%

Conclusion

21Shares set out to build bridges into crypto when it launched the first physically backed crypto ETP in 2018. Since then, 21Shares has launched over 40 additional crypto-backed ETPs, giving investors optionality in their crypto exposure. As a pioneer in this space and a genuinely crypto-native firm, 21Shares has now built additional bridges into the crypto-staking ecosystem. Although not without risks, crypto staking can offer ETP investors new potential return streams that are well worth exploring. With the right information, investors can make informed decisions on which 21Shares products are right for them.

Frequently Asked Questions

- 1. Given the lock-up/unbonding periods often required of staking, do 21Shares ETPs that offer staking also provide daily liquidity?**

Yes, all 21Shares ETPs, including the staking products, can be bought or sold daily. To do so, 21Shares has developed a proprietary active management method for its staking allocations. Thanks to in-house algorithmic models, 21Shares uses the lock-up period of each coin, historical redemption data, a product size analysis, and a qualitative framework to not only define the optimal utilization rate (percentage of ETP assets that are staked) but also to manage it proactively, anticipating market movements and offering liquidity at all time.
- 2. What is the typical return generated by staking rewards in 21Shares ETPs?**

The level of staking rewards depends on the underlying cryptocurrency and constantly changes. Considering the first fifty Proof-of-Stake blockchains and weighting their annual yields by market capitalization, the average staking yield is around 5% a year. However, as these yields are ever-evolving, past performance is no guarantee of future results.
- 3. How do 21Shares' investors receive staking rewards?**

Staking rewards are accrued to the Net Asset Value (NAV) of an ETP at the end of each trading day, making it seamless and immediate for the investors to capture the yield as a performance increase.
- 4. When are staking rewards paid?**

Unlike dividend yields in traditional finance, only paid a few times per year, most staking rewards are paid at the end of every epoch, once every day or few days. This allows investors to immediately stake the rewards to generate a compounding effect.
- 5. Why are some yields higher than others and why do they vary?**

Each protocol's yield is generated through different factors. Block rewards, coming from the network itself in exchange for having secured it, vary protocol by protocol. Rewards can also come from transaction fees or MEV gains, where ordering transactions can generate additional profit. Yields are never guaranteed and may fluctuate over time based on various factors, such as the network's performance or the supply and demand equation.
- 6. ETPs are 100% collateralized in cold storage. Does this apply to staking ETPs?**

Yes. The private keys stay in the ETP's custody at all times and remain in cold storage. Staking providers are integrated with the custodian.
- 7. Can I stake crypto on my own?**

Yes, investors certainly can (and do) directly stake their crypto assets but it requires a substantial setup and a relatively high level of expertise. In addition, significant daily oversight is required to manage slashing risk. This can also be quite expensive given the fees on community validators. By choosing 21Shares staking ETPs, an investor can enjoy the benefits of staking through a professional staking platform, without the need for specialized expertise in staking.
- 8. How do you select the staking providers you work with?**

21Shares is constantly monitoring the landscape of staking providers, assessing both traditional players and their innovations as well as new entrants. Following initial meetings, 21Shares can decide to enter into due diligence with relevant providers. From legal and regulatory assessments to technology and operational ones, 21Shares performs in-depth and comprehensive reviews. Agreements, including insurance coverage, are then negotiated and agreed upon before going live. Once live, 21Shares assesses the financial performance of its different staking providers and allocates its assets accordingly, potentially removing staking providers from its partnership network.
- 9. How does staking keep a blockchain network secure?**

Blockchain technology allows individuals to transact directly between users without the need for an intermediary such as a bank or another financial institution. In a proof-of-stake blockchain, a validator node is a participant responsible for validating transactions and creating new blocks in the blockchain. Validators are often selected based on the amount of cryptocurrency tokens that have been allocated to them. This method, known as stake-based selection, aims to incentivize validators to follow the consensus rules as their tokens can be slashed in case of malicious behavior. Validators with a larger stake have a higher probability of being selected to validate transactions and create new blocks, as they have more to lose if they engage in malicious behavior. In exchange, these validators will receive rewards, which are then distributed to the initial allocators.

Glossary

APR	Annual Percentage Rate, i.e. rewards rate without compounding of interest. Rewards earned are not considered staked again.
APY	Annual Percentage Yield, i.e. a way of expressing the interest rate earned on staked crypto. It takes into account the compounding of interest, i.e. earning rewards on both the sum originally staked and on the rewards being staked themselves.
Baking	Staking on XTZ, with bakers being the validators
Epoch	Period used to mark specific events in the life of a blockchain network, varying in length depending on the blockchain, ranging from a few hours to several days.
MEV	Annual Percentage Rate, i.e. rewards rate without compounding of interest. Rewards earned are not considered staked again.
Node	Computer systems that enforce the network rules, store blockchain data and verify them, and are therefore an integral part of a network.
Proof-of-Stake	Consensus mechanism used by blockchain networks to achieve distributed consensus while financially rewarding the participants, as opposed to Proof-of-Work blockchains that rely on mining mechanisms as well as other types of validation mechanisms.
Slashing	Penalty mechanism to discourage malicious or negligent behavior by network participants like downtime, double signing transactions, or manipulating the network. The penalty is a loss of some of the staked assets, that are either burned or confiscated, with different sanctions depending on the protocol.
Staking	Locking up crypto assets on validator nodes to support the security and operations of a blockchain network, with rewards received in exchange for validating blocks and transactions, generating yield for the asset owners.
Staking Provider	Companies that deploy validators on the network are responsible for the nodes' uptime, for configuring the contract's parameters, and for managing the rewards distribution back to the delegators.
Validator	Type of node in a Proof-of-Stake network, playing a crucial role in the security of the blockchain, responsible for ensuring that all new blocks of transactions are valid and correct before they are permanently added to the blockchain.

General Disclaimer

This document is not an offer to sell or a solicitation of an offer to buy or subscribe for securities of 21Shares AG in any jurisdiction. Neither this document nor anything contained herein shall form the basis of, or be relied upon in connection with, any offer or commitment whatsoever or for any other purpose in any jurisdiction. Nothing in this document should be considered investment advice.

This document and the information contained herein are not for distribution in or into (directly or indirectly) the United States, Canada, Australia or Japan or any other jurisdiction in which the distribution or release would be unlawful.

This document does not constitute an offer of securities for sale in or into the United States, Canada, Australia or Japan. The securities of 21Shares AG to which these materials relate have not been and will not be registered under the United States Securities Act of 1933, as amended (the "Securities Act"), and may not be offered or sold in the United States absent registration or an applicable exemption from, or in a transaction not subject to, the registration requirements of the Securities Act. There will not be a public offering of securities in the United States. Neither the US Securities and Exchange Commission nor any securities regulatory authority of any state or other jurisdiction of the United States has approved or disapproved of an investment in the securities or passed on the accuracy or adequacy of the contents of this presentation. Any representation to the contrary is a criminal offence in the United States.

Within the United Kingdom, this document is only being distributed to and is only directed at: (i) to investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order"); or (ii) high net worth entities, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"); or (iii) persons who fall within Article 43(2) of the Order, including existing members and creditors of the Company or (iv) any other persons to whom this document can be lawfully distributed in circumstances where section 21(1) of the FSMA does not apply. The securities are only available to, and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such securities will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

Exclusively for potential investors in any EEA Member State that has implemented the Prospectus Regulation (EU) 2017/1129 the Issuer's Base Prospectus (EU) is made available on the Issuer's website under www.21Shares.com.

The approval of the Issuer's Base Prospectus (EU) should not be understood as an endorsement by the SFSA of the securities offered or admitted to trading on a regulated market. Eligible potential investors should read the Issuer's Base Prospectus (EU) and the relevant Final Terms before making an investment decision in order to understand the potential risks associated with the decision to invest in the securities. You are about to purchase a product that is not simple and may be difficult to understand.

This document constitutes advertisement within the meaning of the Prospectus Regulation (EU) 2017/1129 and the Swiss Financial Services Act (the "FinSA") and not a prospectus. The 2023 Base Prospectus of 21Shares AG has been deposited pursuant to article 54(2) FinSA with SIX Exchange Regulation AG in its function as Swiss prospectus review body within the meaning of article 52 FinSA. The 2023 Base Prospectus and the key information document for any products may be obtained at 21Shares AG's website (<https://21shares.com/ir/prospectus> or <https://21shares.com/ir/kids>).