

DIGITAL ASSETS
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MarketVector™ Figment Ethereum Staking Reward Indexes



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 **MarketVector™**

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MarketVector Indexes™ (“MarketVector”) together with Figment introduce two innovative indexes to provide a more comprehensive measure of the value of Ethereum.

The MarketVector™ Figment Ethereum Total Return Index combines Ethereum’s market performance with staking rewards into an innovative, customizable benchmark.

The MarketVector™ Figment Ethereum Staking Reward Reference Rate is a daily annualized rate of Ethereum rewards. These products are tailor-made for institutions, marrying MarketVector’s expertise in index administration with Figment’s best-in-class Ethereum rewards capture. Our initial focus is on Ethereum (ETH), paving the way for future opportunities to expand and extend these innovative products to other assets

Part I. MarketVector™ Figment Ethereum Staking Reward Reference Rate

What is it?

The **MarketVector™ Figment Ethereum Staking Reward Reference Rate** measures the annualized rate resulting from staking ETH on Ethereum. Validators stake ETH to validate transactions in Ethereum’s Proof of Stake (PoS) system and receive staking rewards for their roles in attesting and proposing blocks.

Validators who neglect these duties miss rewards and face penalties. Violations, known as “slashing events,” include simultaneous proposals or attestations. Slashing incurs immediate penalties like removal from active validators, and additional penalties based on the proportion of other validators slashed (correlated slashing penalty).

The **MarketVector™ Figment Ethereum Staking Reward Reference Rate** calculates the net rewards obtained after deducting slashing penalties, annualized on a daily basis.

What’s included?

The daily reward rate represents all rewards earned by validators in a 24-hour period (from 00:00 UTC to 23:59 UTC).

The Figment ETH Rewards Rate encompasses rewards obtained from all activities on the Consensus Layer (CL), including block proposals, attestations, sync committee, and slashing reporting, and the Execution Layer (EL), including priority transaction fees and MEV. Penalties incurred from slashing are automatically deducted.

What's the value-add?

Inclusive Reward Capture: Our off-the-shelf rewards rate captures all on-chain activity, including the rewards earned on both the consensus and execution layer and slashing penalties.

Available Daily: Published at 17:00 GMT daily, including weekends and holidays, to match the continuous nature of digital asset markets.

Standardized Approach: We calculate and publish the Ethereum Rewards Rate to five decimals, aligning with other traditional financial benchmarks such as LIBOR.

“Off-the-shelf rewards rate captures all on-chain activity.”

Customizable: We can build a custom rewards rate based on your needs, whether it be consensus-layer-only rewards, deducting third-party validator fees (off-chain), or focusing on the rewards rate of a subset of validators, such as Figment-only.



Part II. MarketVector™ Figment Ethereum Total Return Index Methodology

What is it?

The **MarketVector™ Figment Ethereum Total Return Index** takes a comprehensive and flexible approach by considering Ethereum's consensus and execution layer rewards, as well as its market price. This approach provides a holistic perspective on Ethereum's performance, taking into account all possible reward sources and slashing incidents while utilizing reliable exchange data to capture the market price of Ethereum.

What's included?

Our off-the-shelf index offering includes the volume-weighted Ethereum price of ETH at 17:00 GMT and combines it with the **MarketVector™ Figment Ethereum Staking Reward Reference Rate**, which includes all consensus layer and execution layer rewards earned by Ethereum validators across the network during the previous 24-hour period.

What's the value-add?

Comprehensive Reward Capture: The Figment ETH Rewards Rate captures all rewards earned on both the Consensus Layer and the Execution Layer and includes any slashing events or missed rewards.

Institutional-Quality Market Data: Ethereum’s pricing data is provided by [Digital Asset Research](#), an industry leader, that uses a ‘clean’ data approach based on vetting exchanges and volumes to provide accurate ETH pricing.

Customizable for Client Needs: We recognize that institutions serving different markets have diverse needs, and our index is adaptable to meet those requirements. We can customize many elements of the index, including:

1. **Market price timing**
Option to select a price snap based on your product’s market.
2. **Rewards type**
Consensus or Execution layer rewards or both.
3. **Validator subsets**
Custom indexes are based on specific validators and not the entire ETH network.
4. **Reward Models**
 - a. **Compounding Rewards Model:** Combines the Ethereum price with compounding rewards on a predefined rebalancing schedule. This is suited for long-term investors with large AUM pools, such as ETPs, ETFs, and other index products.
 - b. **Accumulating Rewards Model:** Adds accumulating rewards to the Ethereum price without rebalancing. It aims to provide steady growth of investment without frequent distribution of rewards. Ideally suited for smaller institutional investors who are managing a pool of Ethereum.
 - c. **Distributing Rewards Model:** A total return index with all earned rewards distributed, versus rebalanced or accumulated. This option is suited for investors who want to treat ETH rewards as an income stream.
5. **Branding**
Customized indexes can carry your institution’s name or leverage the MarketVector and Figment brands.

“We can customize many elements of the index, including market price timing, rewards type, validator subsets, reward models, and branding.”

Daily Publishing: Published once daily, seven days a week, ensuring transparency and consistent tracking of market price and earned rewards, matching the continuous nature of digital asset markets

Utilization Ratio: Assists investors in managing liquidity requirements by indicating the proportion of an investor's total Ethereum portfolio that is staked. For instance, a Utilization Ratio of 0.6 would mean that 60% of the investor's Ethereum holdings are staked, and the remaining 40% is readily available to meet liquidity needs.

Investors and product issuers use this ratio to maintain a balanced portfolio, ensuring they do not stake 100% of their holdings and potentially run into liquidity issues, such as a fund redemption or rebalancing event. By carefully managing the Utilization Ratio, investors could choose to optimize their portfolios for both reward potential and liquidity needs.

Part III. Staked Ethereum's Role in Exchange-Listed Products

Why Consider Staking Ethereum in an Index Fund?

Staking as a source of rewards

Stakers, or holders of ETH, stake ETH to validators, who propose and attest to new blocks on the Ethereum blockchain on behalf of the staker. The action of staking validates new transactions and codifies the historical provenance of the blockchain. In return, stakers receive newly minted ETH as well as the transaction fees contained within the block. Staking is the exclusive method to earn newly issued ETH.

All attesting validators are rewarded with newly issued ETH every epoch, which is roughly 6.4 minutes. Validators are also rewarded with the priority transaction fees included in the blocks they propose. Though the rewards are technically earned by the work of the validator, they are distributed by the Ethereum protocol and received by the staker's Ethereum wallet.

Under today's market conditions, a fund with a balance of USD 15 million in ETH could earn an additional 32 ETH on a monthly basis by staking, meaning the fund may potentially add a new validator or more, based on market conditions, on a monthly basis. Ethereum does not automatically compound earned rewards and all new validators must be funded with 32 ETH.

The Figment ETH Rewards Rate encompasses rewards obtained from various activities on both the CL and EL. As illustrated in Figure 1. **The MarketVector™ Figment Ethereum Staking Reward Reference Rate** combines the CL and the EL rewards into one comprehensive reward capture index.

Reflects complete ownership of Ethereum

As depicted in Figure 2, the incorporation of Ethereum staking rewards can potentially contribute to enhanced returns over time, compared to just tracking the Ethereum price performance.

“Staking is the exclusive method to earn newly issued ETH.”

Allows for product differentiation

Staking rewards may allow fund managers to increase the revenues of the fund while finding innovative ways to compensate investors. Typically, in funds that stake ETH, the fund manager retains a portion of the rewards as revenue, while the rest is returned to shareholders. Some funds are structured to return an investor’s pro-rata share of rewards directly in the form of an ETH or fiat payment. For funds that cannot directly distribute payments to investors, the additional revenue earned by staking may be used to increase the amount of ETH entitled per share of the fund and/or reduce management fees.

Ethereum’s Inflation and Burn Mechanics

Ethereum's supply is typically deflationary, meaning the number of available coins decreases over time. Previously, during Ethereum’s proof-of-work era from 2015-2022, Ethereum had new issuance of approximately 13,000 ETH per day, and the network float peaked at 120.5 million ETH on September 15, 2022, the day of the Merge to proof-of-stake. Since the merger, the ETH supply has decreased by about 0.3% per year and is designed to continue decreasing. This reduction is due to the burning of base transaction fees, potentially resulting in a decrease in the overall supply. As more people use Ethereum, ETH becomes scarcer, while staking ETH and capturing new issuance may become more valuable.

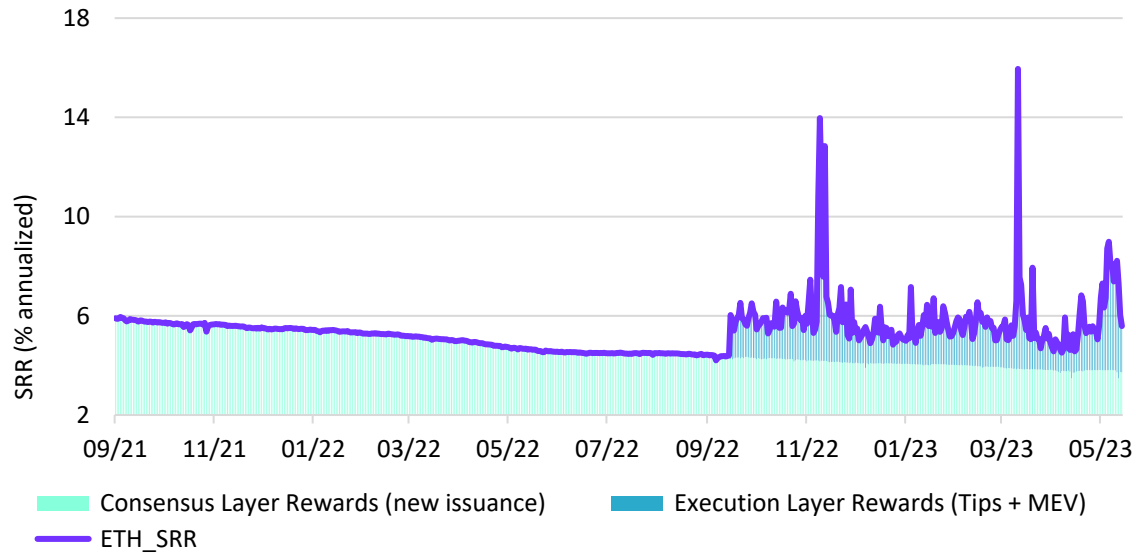
Network Security

ETH stakers not only earn rewards but also contribute to making the network more secure. ETH staking participation increases the security of Ethereum because the cost to attack the network also grows as more validators join the network. An attacker would need to control more than one-third of the active validators to attempt to prevent transactions from finalizing on the Ethereum blockchain.

To illustrate this, assume the active validator set of Ethereum is made up of 1,000,000 validators, each with 32 ETH staked. Preventing blocks on the chain from finalizing would require an attacker to control at least 333,334 validators or 10,666,688 ETH. An active set of 10,000,000 validators would require 106,666,688 ETH staked, and so on. Even if the attacker is successful in pausing finality, Ethereum has a defense mechanism to restore finality called “inactivity leak”, which activates when the chain fails to reach finality for more than 4 epochs (~26 minutes).

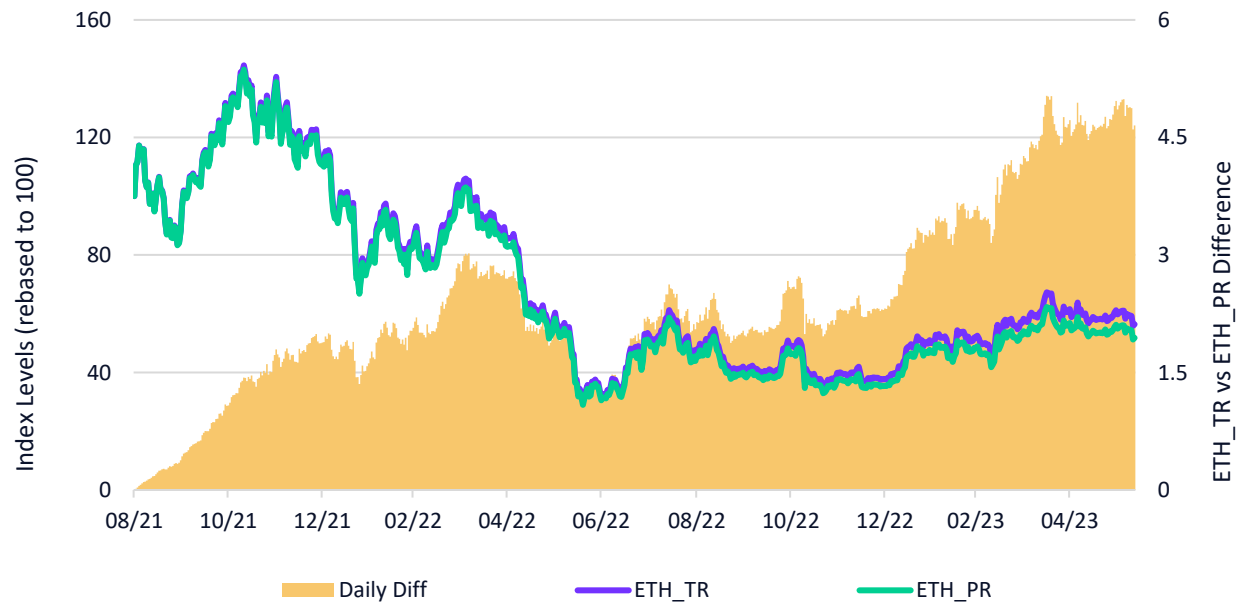
“Staking rewards may allow fund managers to increase revenues of the fund while finding innovative ways to compensate investors.”

Figure 1: MarketVector™ Figment Ethereum Staking Reward Reference Rate (ETH_SRR)



Source: marketvector.com as of June 30, 2023. The chart is provided for illustrative purposes. However, please note that past performance is not indicative of future results, and all investments carry risks. For up-to-date performance figures, we invite you to visit MarketVector’s [website](#)

Figure 2: MarketVector™ Figment Ethereum Total Return Index (ETH_TR) vs. MarketVector™ Ethereum Index (ETH_PR)



Source: marketvector.com as of June 2023. The chart is provided for illustrative purposes. However, please note that past performance is not indicative of future results, and all investments carry risks. For up-to-date performance figures, we invite you to visit MarketVector’s [website](#).

Part IV. FAQs

Does ETH staking rewards decrease as more people stake?

It depends.

On a network-wide basis, CL rewards, which are awarded for actively validating and proposing blocks, increase as the number of active validators increases. However, on a per-validator basis, CL rewards decrease as more active validators participate.

EL rewards are the fees, usually referred to as priority fees or “tips”, paid in Ethereum by users transacting on the network. EL rewards depend on users’ demand for blockspace, or to have their transaction included in a more recent block. In times of high transaction volume, users will pay a premium for the speed at which their transactions settle. Thus, EL rewards are more difficult to predict and dependent on how users are transacting on Ethereum. It is almost a certainty that EL rewards will not remain constant.

How does Ethereum determine the amount of rewards paid out to stakers?

CL rewards are deterministic by the network and constitute the majority of rewards earned on a consistent basis. CL rewards can be viewed as compensation by Ethereum to validators for running the network. The Ethereum specs can be reviewed to get an understanding of how these rewards are determined.

EL rewards are paid by Ethereum’s users to the validators proposing blocks; these users are paying to increase the chances that their transactions will be included in a block (or more specific outcomes in the case of MEV). Generally, EL rewards are related to demand for blockspace which can vary considerably over time.

Does the Ethereum Total Return Index include liquid staking?

The index does not include liquid staking or any off-chain derivative of Ethereum.

What are the biggest risks to consider when staking ETH?

Slashing is the most important risk to consider when staking ETH. Unlike other blockchain networks, slashing has a very specific meaning on Ethereum; it refers to equivocation or double signing. This occurs when a validator is proposing or attesting twice, effectively voting for two versions of the state of Ethereum. Regardless of the validator’s intent, an honest error or malicious, in all instances of double-signing, the validator pays a penalty: A portion of the staker’s ETH is burned, and the validator is removed from actively proposing and attesting to new blocks.

There are specific things that can be done to limit slashing risk, especially when outsourcing to an institutional third-party validator like Figment. The service provider can use remote signing software like Web3Signer to ensure their validators are only attesting once, and have robust insurance coverage to compensate stakers should a slashing event occur.

Figment operates under a "safety over liveness" principle, meaning that they prioritize the reduction of the likelihood and magnitude of double-sign slashing events. Besides operating robust infrastructure, Figment provides its customers with off-the-shelf coverage to further mitigate against these staking risks. Figment's Ethereum customers can also opt to purchase additional double-sign slashing coverage through its on-chain coverage partner, Nexus Mutual.

To find out more about MarketVector™ Figment Ethereum Staking Reward Indexes, contact: sales@marketvector.com

About MarketVector

MarketVector Indexes™ (“MarketVector”) is a regulated Benchmark Administrator in Europe, incorporated in Germany and registered with the Federal Financial Supervisory Authority (BaFin). MarketVector maintains indexes under the MarketVector™, MVIS®, and BlueStar® names. With a mission to accelerate index innovation globally, MarketVector is best known for its broad suite of Thematic indexes, long-running expertise in Hard Asset-linked Equity indexes, and its pioneering Digital Asset index family. MarketVector is proud to be in partnership with more than 25 Exchange Traded Product (ETP) issuers and index fund managers in markets throughout the world, with approximately USD 29 billion in assets under management.

As pioneers in 2017, we introduced groundbreaking products, such as our flagship Bitcoin & Ethereum Indexes. Since then, our product offering has only continued to expand and innovate across multi-token, thematic 'category' indexes, fundamental indexes, and staking rewards. Our indexes serve as the underlying foundation for various financial products such as ETFs/ETPs, UCITs, SMAs, as well as derivatives and futures. We can tailor comprehensive index solutions to help you accurately measure, benchmark, and capture performance, giving your ideas an edge in the digital asset market.

To learn more about MarketVector’s Digital Assets, please visit our [website at marketvector.com](https://www.marketvector.com)

About Figment

Figment is the leading provider of staking infrastructure with billions of dollars of assets staked. Figment provides a comprehensive staking solution for asset managers, exchanges, wallets, foundations, custodians, and large token holders to earn rewards on their digital assets. Figment’s institutional staking service offers a point-and-click staking dashboard, portfolio reward tracking, API integrations, audited infrastructure, and slashing protection. Additionally, Figment empowers clients with standardized, accurate data for use cases such as index construction. Figment aims to support the adoption, growth, and long-term success of the digital asset ecosystem.

To learn more about Figment, please visit our website at [figment.io](https://www.figment.io)

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