The ETH Merge and Valuing Layer 1 Blockchains

Host:
Peter Hans, Chief Strategy Officer

Featured Guests:
Katie Talati, Director of Research
Nick Hotz, CFA, VP of Research

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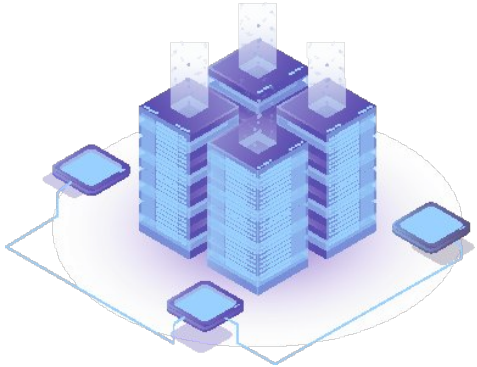
What Are Layer 1 Blockchains?



Blockchains are networks of computers that agree on a set of data.

Layer 1 (L1) characteristics:

- ➔ Do not rely on other blockchains for security
- ➔ Act as base layers to support development of decentralized applications (dApps), such as Uniswap and OpenSea

Layer 1 blockchain examples:

bitcoin ethereum SOLANA

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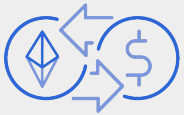
Why Blockchains Need Tokens

Blockchain transactions are validated by **on-chain nodes** that require scarce computation power to process.



Blockchains charge a usage fee to sustain available computation power and **avoid "tragedy of the commons."**

The **usage fee** is paid in the **L1 blockchain's native token** — e.g., ETH on Ethereum.

L1 tokens enable the formation of a **marketplace** and establish the value of the underlying blockchain.

How Traditional Valuation Methods Fall Short

Some metrics that have been used to value L1 tokens:

Discounted cash flows (DCF)

Price-to-earnings ratio (P/E)

- Why these traditional methods are used:

  Misunderstanding the asset class L1 tokens fall into.

  Example: Valuing ETH like an equity is incorrect because Ethereum has the added functionality of creating the ETH it "earns." This is unique to L1s, since companies cannot create U.S. Dollars—they can only earn them.

- Our conclusion:

  - **Governments** are the one entity that can create currencies
  - **Likening blockchains** to governments helps interpret the value of L1 tokens

Why L1 Tokens Can't Be Valued As Equities

APPLE

Q2 Earnings ($)	$19,442,000,000
Apple Market Cap	$2,462,000,000,000
Implied P/E	31.7x
AAPL Price	$154.48
Q2 Earnings ($)	$19,442,000,000
New AAPL Price	$463
New Q2 Earnings	$19,442,000,000
New Market Cap	$7,386,000,000,000
New Implied P/E	**95.0x**

Source: Apple public filings

ETHEREUM

Q2 Earnings ($'s of ETH Burnt)	$635,167,530
Ether Market Cap	$167,250,000,000
Implied P/E	65.8x
Eth Price	$1,387
Q2 Earnings (ETH Burnt)	457,284
New ETH Price	$4,161
New Q2 Earnings	$1,905,502,589
New Market Cap	$501,750,000,000
New Implied P/E	**65.8x**

Source: Etherscan

Comparing L1s to Currencies

Features	Nations and Currencies	L1 Blockchains and Tokens
1 **Secure ecosystem**	Military	Miners and stakers
2 **Asset issuance and taxation**	Issue currency and tax it back via income, value-added, capital gains, or other taxes	Issue a native token and pay user fees to validators or burn them
3 **Marketplace diversity**	Many different sectors including commodities, final goods, and services	Trade of goods (via NFTs) and services (DeFi, other applications)
4 **Trade with other economies**	Via overseas/cross-border trade routes	Via bridges
5 **Governance of rule changes**	Government action or revolution	“Chain forks”

How to Value Currencies

Currencies do not have **cash flows**, unlike equities.

Currencies are traded on **fluctuation in supply** and **inflation-adjusted interest rates.**

Shifts in supply and inflation-adjusted interest rates are caused by changes in **economic strength, inflation, and policy.**

These same techniques can be applied to understanding L1 tokens.

How to Value Layer 1 Tokens

Accruing Value:

Supply:

Token scarcity, reducing issuance (inflation), or circulating supply

Demand:

Desirable blockspace, incentivizing payment to transact on the chain

Measuring Value:

Supply:

- Mining new native tokens
- Burning fees
- Event catalysts

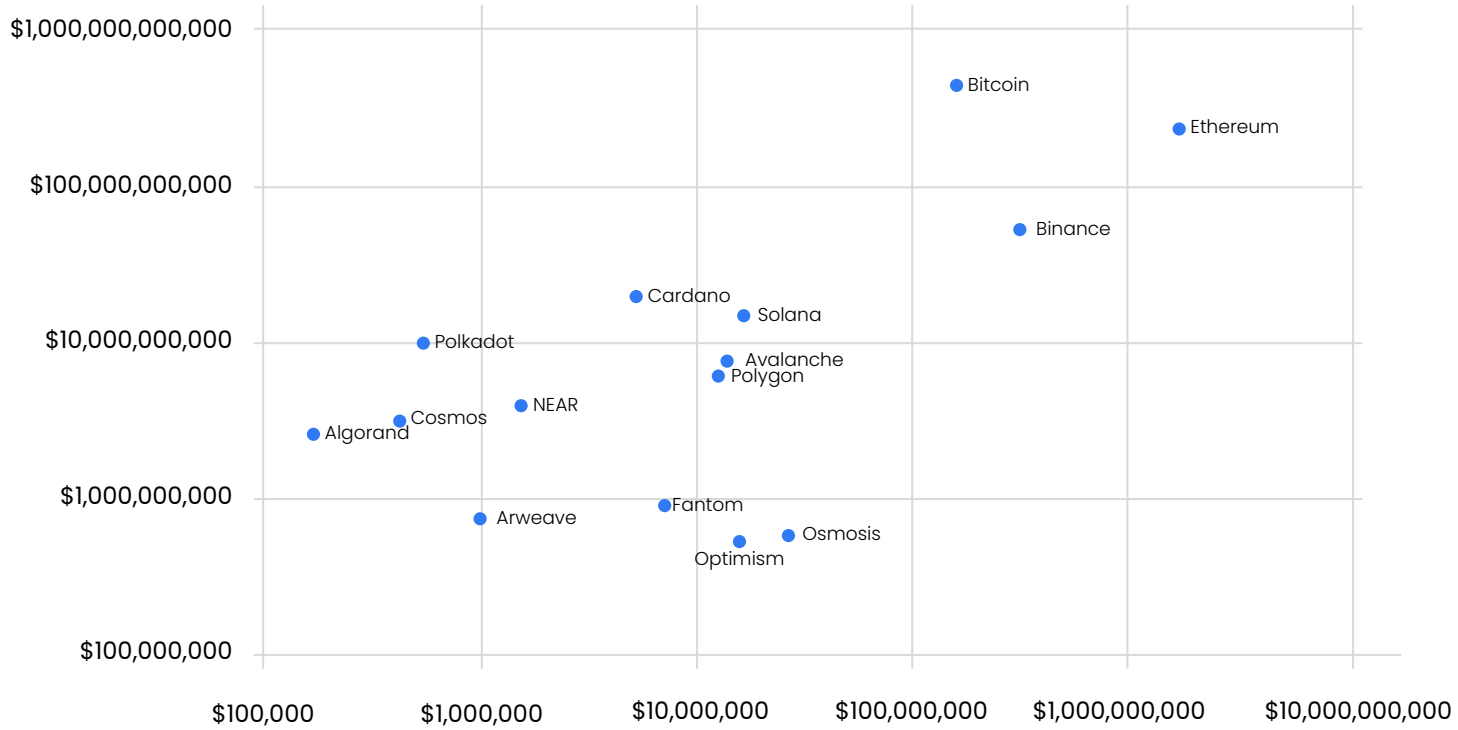
Demand:

- Fees (direct indicator)
- TVL (indirect indicator)
- Wallet addresses (indirect indicator)
- Developer activity (indirect indicator)

Other L1 Metric Considerations

	Economic Indicators	Measurement
Fees	• Can be a lagging indicator or set artificially low to stimulate demand	• Most difficult metric to manipulate
Total Value Locked (TVL)	• Most representative of new funds flowing into a chain	• Easy to manipulate
Wallet Addresses/Transactions	• Coincident indicator of economic activity	• Harder to manipulate, depending on the chain
Developer Activity	• Can be a leading indicator of future activity	• Difficult to measure importance of activity (“noise” levels can be high)

Layer 1 Market Cap vs Annualized fees



Sources: Messari, Coingecko, Artemis, Token Terminal, and Glassnode

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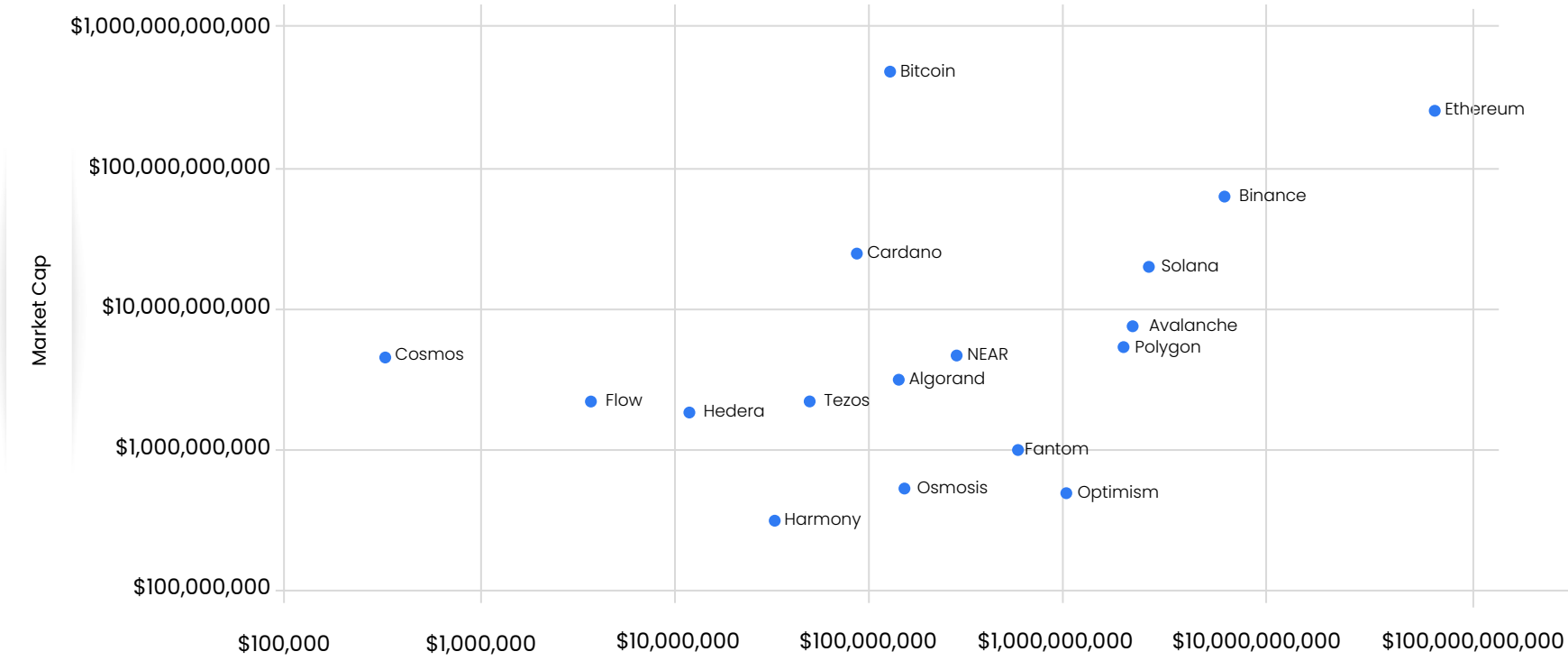
Layer 1 Market Cap vs Total Value Locked



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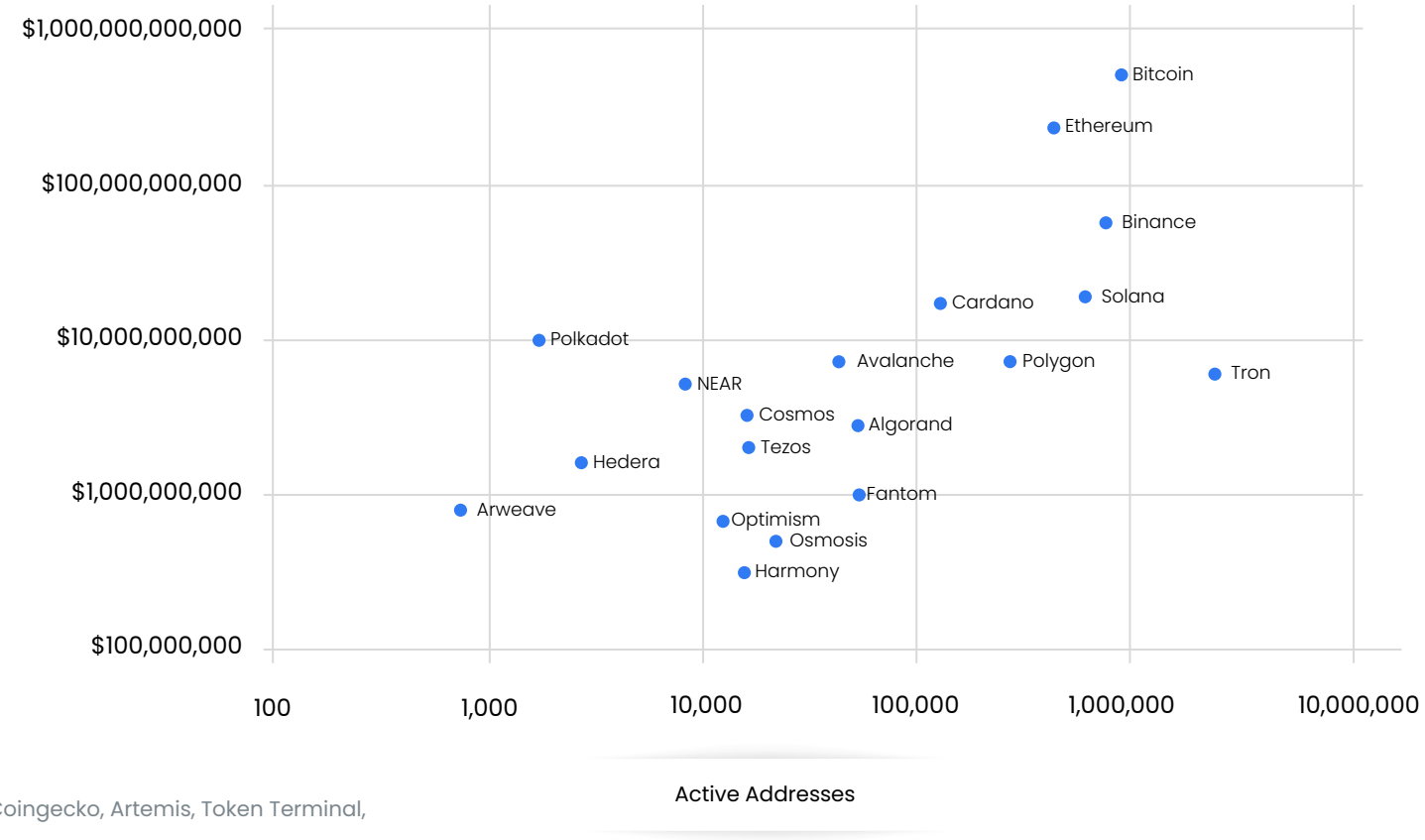
Layer 1 Market Cap vs Active Addresses



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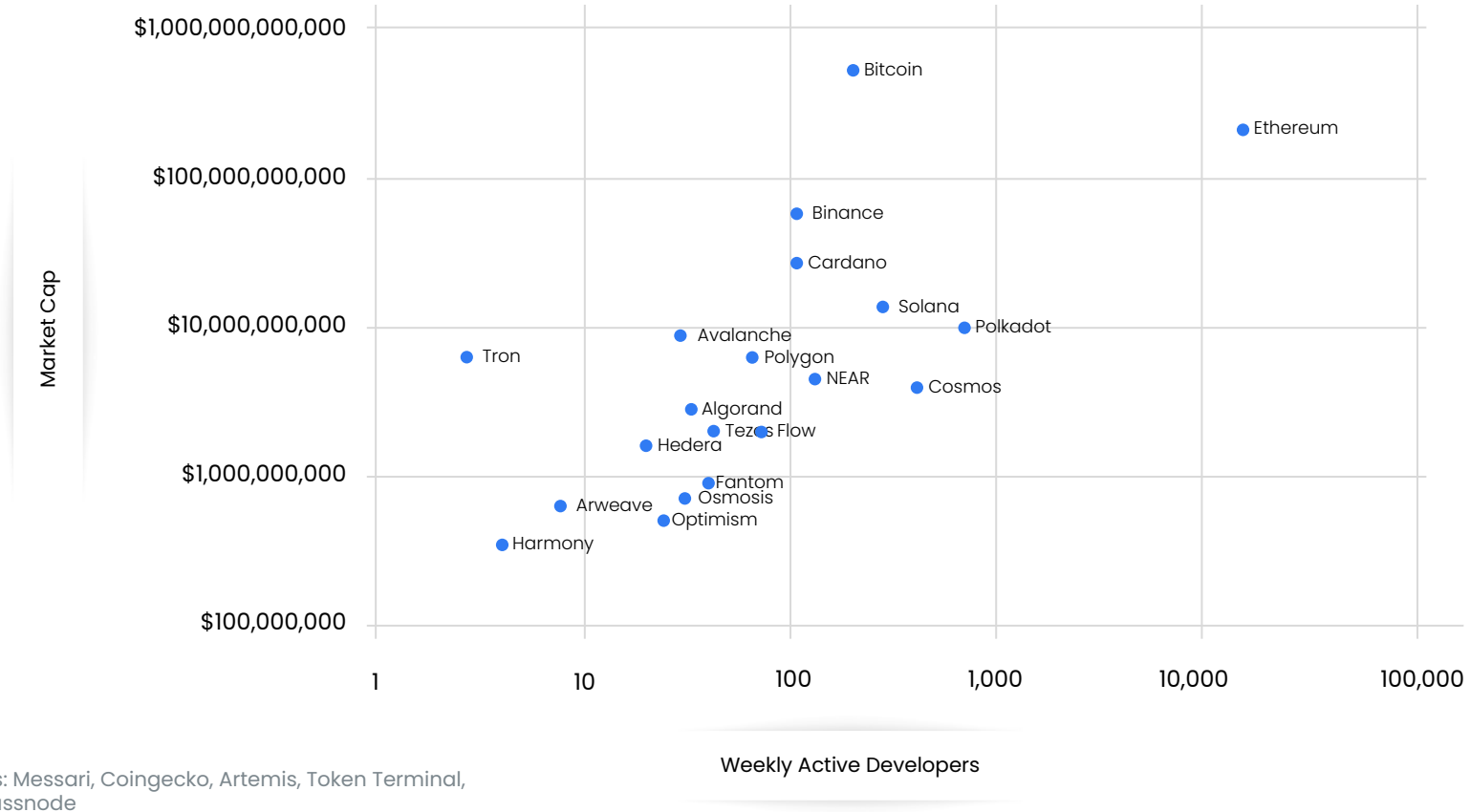
Layer 1 Market Cap vs Weekly Active Developers



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What Is the Ethereum Merge?

- **Changes how we decide what transactions are valid on Ethereum**
  - Previously optimized computers, called miners, competed to validate transactions
  - Now, ETH holders that lock up ETH (called stakers) ensure validity
- **A more environmentally-friendly consensus model**
- **Greater economic efficiency**

The Effects of the Ethereum Merge

Issuance slashed by around 87%

Strongly increases the chances of ETH becoming a deflationary asset during certain periods

Incentivizes token holders to lock up ETH to earn a staking yield*

Potentially catalyzes a supply shock to ETH

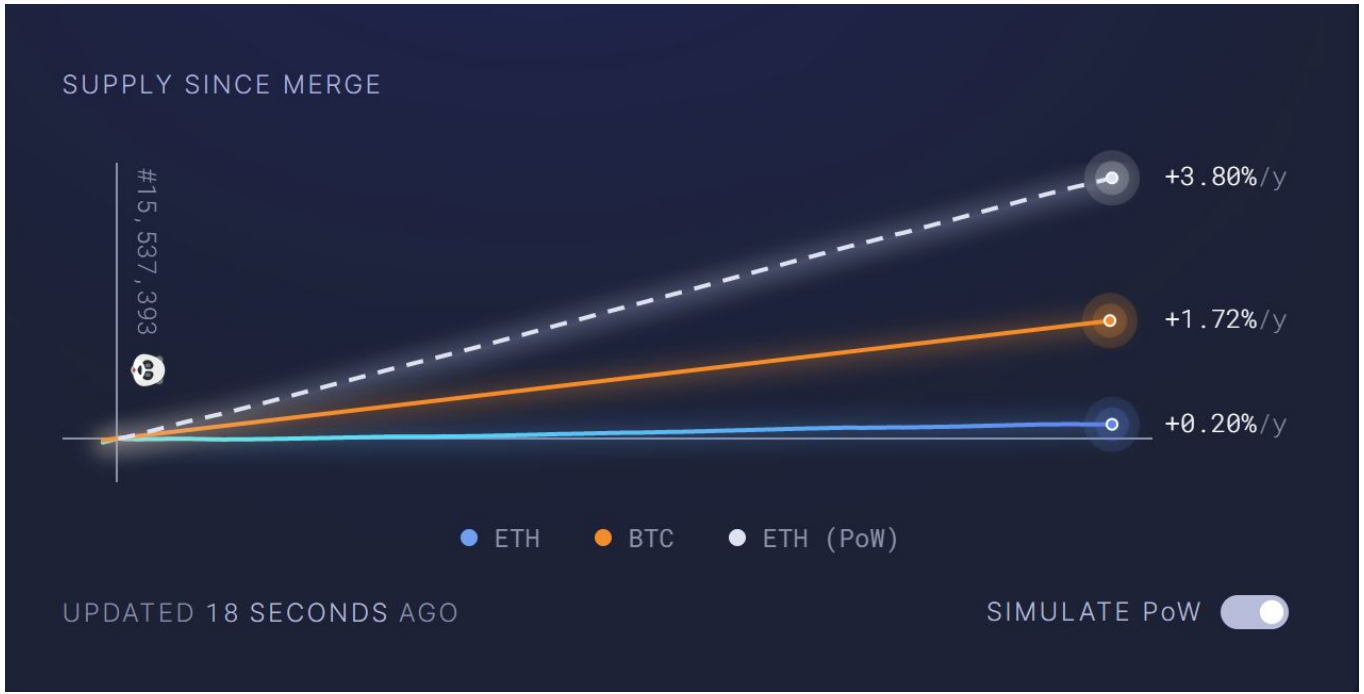
Yield established for ETH paid from transaction fees

Staked ETH becomes like an “internet bond”

More than 11% of the ETH supply is locked up for staking on the Ethereum 2.0 chain, as of 10/13/2022

*Justin Drake, Ethereum Foundation
**Glassnode Studio

The Issuance Reduction of the Merge



Source: ultrasound.money

A Thoughtful Approach to Digital Asset Investing

Questions?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