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Ethereum Ecosystem Is Getting Busier, Not Quieter, Amid Layer 2 Shift

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From developer and decentralized application (dapp) counts to progress along its roadmap to general public awareness, there are many metrics that may be used to measure Ethereum's progress over time. One of the most popular is transaction count, which is notable not only due to its correlation with items like adoption and fee generation, but also as it measures actual usage of the protocol itself. Unfortunately, transactions on Ethereum are now down ~26% from their May 2021 peak, suggesting that Ethereum is, at best, temporarily moving backwards and, at worst, in long-term decline. This, however, couldn't be further from the truth.

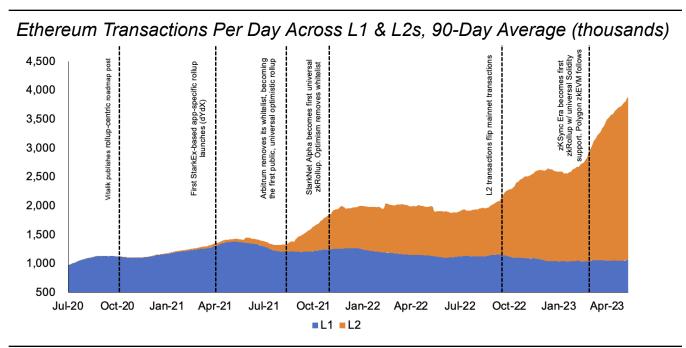
To better understand why Ethereum is thriving despite a falling transaction count requires an understanding of Ethereum's plans for the future¹. While Ethereum can directly facilitate all blockchain activities on mainnet (consensus, execution, data availability, settlement), it is pioneering a more modular approach, enabling certain functionality to be outsourced to separate, optimized protocols for improved performance. Chief among these is execution, with transactions outsourced to layer 2 (L2) rollups for more efficient processing.

Rollups are a type of L2 scaling solution that bundle multiple transactions together, executing them in batches offchain before posting a smaller amount of data back to mainnet that's sufficient to reconstruct the rollups state. Moving transactions offchain in this regard vastly increases throughput, and, as the state of the rollup can be recreated and verified using the data posted on Ethereum mainnet, rollups inherit many of the security properties of mainnet itself. This strategy was a shift in Ethereum's scaling roadmap proposed by Vitalik Buterin in 2020, dubbed the rollup-centric roadmap, which prioritized outsourcing execution to rollups and bolstering Ethereum's data availability layer to reduce the cost of posting data back to mainnet. In short, it retrenched the focus of Ethereum mainnet to consensus, settlement, and data availability.

With that as background, we can now view Ethereum's declining mainnet transaction count in a different light. And when adding in L2 transactions, we see that total ecosystem transactions, including those on mainnet and layer 2s, are up a strong 146% over the last two years. Not only does this show that usage of Ethereum continues to increase rapidly, but also that it continues to progress along its roadmap exactly as intended.

Lastly, we see strong growth and a shift towards offchain execution continuing for several reasons. First, the Ethereum protocol continues to move in this direction and will particularly do so with its next upgrade featuring proto-danksharding that expands Ethereum's data availability capabilities. Moreover, in addition to the base layer itself improving, so too are the layer 2s, with improved decentralization and new paradigms around interconnectivity and shared security ahead. And these base and secondary layer improvements will come together to enable new use cases and functionality, creating a virtuous cycle. Portended by rising ecosystem transaction counts, Ethereum is perhaps on its way to one day becoming the world's settlement layer.





Source: L2Beat, GSR. Data as of June 7, 2023.

Footnotes:

1. See The Surge section specifically for a deeper dive into layer 2s and Ethereum's danksharding roadmap.

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