What's Hot: Ethereum Dencun Upgrade - A Step Towards a More Scalable Ethereum

Published 18 March 2024

Blake Heimann
Associate Director, Quantitative Research

Key Takeaways

- Ethereum Dencun Upgrade has been a success
- Ethereum making progress towards improved scalability
- Cheaper transactions for layer 2's

On March 13, 2024, Ethereum achieved a significant milestone with the successful mainnet deployment of the Dencun Upgrade. This upgrade, which represents the culmination of extensive development efforts and collaboration among Ethereum core developers, introduced changes to the network that reduce fees and increase transaction speeds for layer two solutions settling transactions on Ethereum.

Why does this matter? For Ethereum to remain competitive as a layer one smart contract platform, serving as the 'base layer' or foundation of the ever-expanding web3 economy, many use cases require cheaper transactions and higher transaction throughput. For example, gaming applications may require significant data transfer, leading to many blockchain transactions, which can amount to high costs when playing a blockchain game. In decentralised finance (DeFi), it may be reasonable to think that structuring a multi-leg DeFi trade on Ethereum for a cost of 50+ USD is small for large investors, but for those deploying smaller amounts of capital, these costs can eat into the position's potential returns. Through Layer 2 solutions (L2s) that 'sit on top' of Ethereum, which 'bundle' transactions and settle them on Ethereum together, users and applications can garner cheaper transaction fees and higher transaction speeds, making these innovative blockchain use cases more accessible.

Blockchain and Payments Platform Transaction Speeds and Costs

Blockchain/Payments Platform	Max Transaction Per Second	Fee (USD)
Bitcoin	10.9	6.29
Ethereum	62.3	13.24
Arbitrum	380	0.06

Optimism	32.9	<0.01
Solana	1,604	<0.01
Polygon	282	1.29
L2 Post Dencun (Est.)	1,000	0.01
L2 Full Danksharding (Est.)	1,000,000	<0.01
Visa	65,000	*1.30%

*Source: CoinCodex, L2fees.info, Chainspect.app, ethereum.org, Ycharts, Visa as of March 2024. Fees for layer 1 and layer 2 smart contract platforms are for token swaps, whereas fees for Bitcoin are for transfers. *Fees for visa are represented by credit card interchange fees. Transaction per second represents the maximum recorded transaction per second over the last month for blockchains.*

Proto-Danksharding: A Step Towards Full Danksharding

How these reduced costs and improved speeds are achieved is through something called proto-dank-sharding.

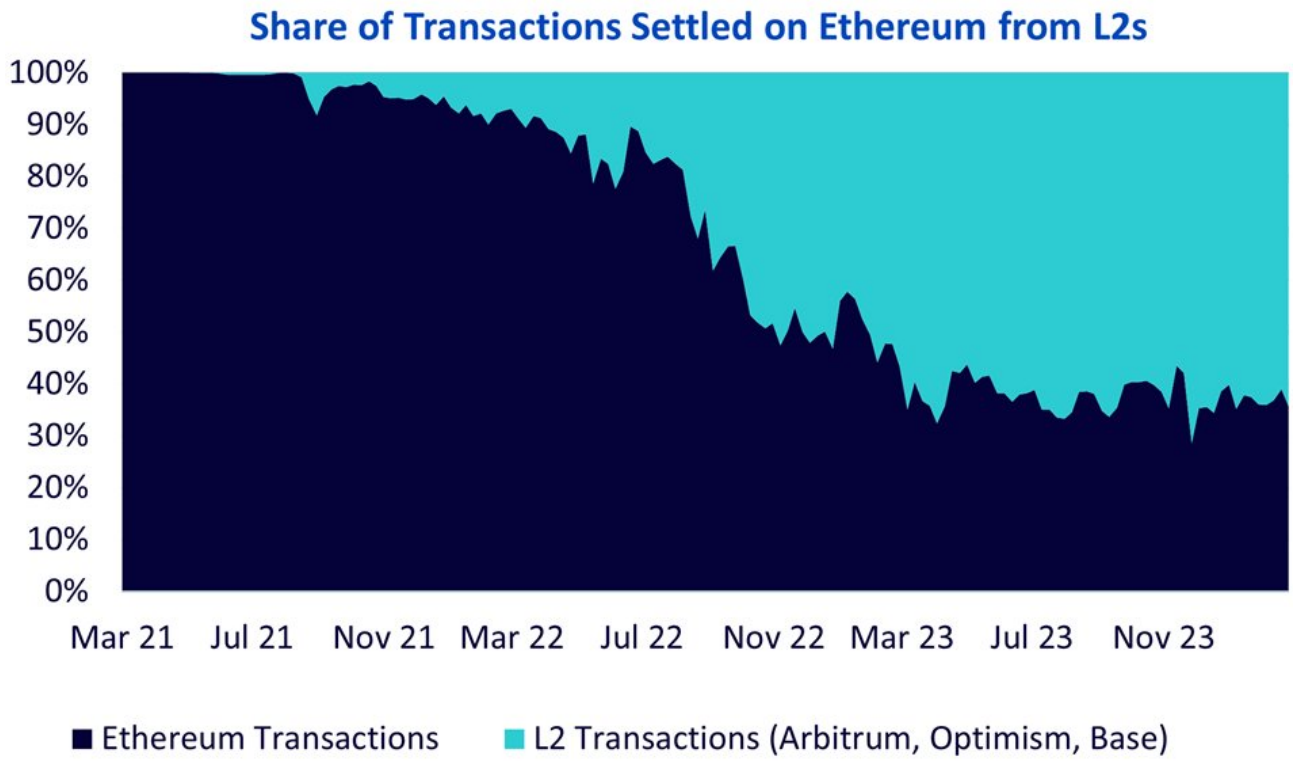
At its core, proto-danksharding introduces a novel transaction type that deals with “blobs” of data. These blobs are stored only for a limited duration and remain inaccessible to the Ethereum Virtual Machine (EVM). By leveraging these data blobs, layer 2’s can substantially reduce the expenses associated with transmitting data, ultimately leading to more affordable transactions for end users.

The term “proto” signifies that this proposal serves as a foundational step toward implementing full “dank-sharding.” While proto-danksharding provides immediate benefits, the long-term vision aims to extend scalability advantages even further, to a stage where transaction speeds surpass 1,000,000 transactions per second.

The Future of Ethereum

With the successful deployment of the Dencun Upgrade, Ethereum has taken a major step towards solving the scalability problem that has plagued many blockchain platforms. By supporting a variety of layer 2 solutions and dApps, Ethereum aims to become the dominant base layer of the web3 world, where users have more control, privacy, and freedom over their online activities.

Since late 2022, L2 transactions have become a greater portion of transactions settled on Ethereum. With the introduction of proto-danksharding and the resulting speed and fee benefits, these L2's have the potential to steal market share from some of the other competing layer 1 smart contract platforms, moving activities from 3rd party blockchains to an already dominant and highly integregated Ethereum / L2 ecosystem. This is a compelling scenario for Ethereum investors, who stand to benefit from the possible increased adoption and innovation of L2s who use Ethereum as their final settlement layer.



Source: Dune Analytics as of 13 March 2024; Ethereum and its L2s: Growth Comparison @jhackworth. Ethereum.org 2024.
Historical performance is not an indication of future performance and any investments may go down in value.

The Dencun Upgrade and the introduction of proto-danksharding have set the stage for a bright future for Ethereum. With continued development and innovation, the platform is poised to lead the transition towards a more decentralized and equitable web3 world.

Important Risks Related to this Article

IMPORTANT INFORMATION

Marketing communications issued in the European Economic Area ("EEA"): This document has been issued and approved by WisdomTree Ireland Limited, which is authorised and regulated by the Central Bank of Ireland.

Marketing communications issued in jurisdictions outside of the EEA: This document has been issued and approved by WisdomTree UK Limited, which is authorised and regulated by the United Kingdom Financial Conduct Authority.

WisdomTree Ireland Limited and WisdomTree UK Limited are each referred to as "WisdomTree" (as applicable). Our Conflicts of Interest Policy and Inventory are available on request.

For professional clients only. Past performance is not a reliable indicator of future performance. Any historical performance included in this document may be based on back testing. Back testing is the process of evaluating an investment strategy by applying it to historical data to simulate what the performance of such strategy would have been. Back tested performance is purely hypothetical and is provided in this document solely for informational purposes. Back tested data does not represent actual performance and should not be interpreted as an indication of actual or future performance. The value of any investment may be affected by exchange rate movements. Any decision to invest should be based on the information contained in the appropriate prospectus and affer seeking independent investment, tax and legal advice. These products may not be available in your market or suitable for you. The content of this document does not constitute investment advice nor an offer for sale nor a solicitation of an offer to buy any product or make any investment.

An investment in exchange-traded products ("ETPs") is dependent on the performance of the underlying index, less costs, but it is not expected to match that performance precisely. ETPs involve numerous risks including among others, general market risks relating to the relevant underlying index, credit risks on the provider of index swaps utilised in the ETP, exchange rate risks, interest rate risks, inflationary risks, liquidity risks and legal and regulatory risks.

The information contained in this document is not, and under no circumstances is to be construed as, an advertisement or any other step in furtherance of a public offering of shares in the United States or any province or territory thereof, where none of the issuers or their products are authorised or registered for distribution and where no prospectus of any of the issuers has been filed with any securities commission or regulatory authority. No document or information in this document should be taken, transmitted or distributed (directly or indirectly) into the United States. None of the issuers, nor any securities issued by them, have been or will be registered under the United States Securities Act of 1933 or the Investment Company Act of 1940 or qualified under any applicable state securities statutes.

This document may contain independent market commentary prepared by WisdomTree based on publicly available information. Although WisdomTree endeavours to ensure the accuracy of the content in this

document, WisdomTree does not warrant or guarantee its accuracy or correctness. Any third party data providers used to source the information in this document make no warranties or representation of any kind relating to such data. Where WisdomTree has expressed its own opinions related to product or market activity, these views may change. Neither WisdomTree, nor any affiliate, nor any of their respective officers, directors, partners, or employees accepts any liability whatsoever for any direct or consequential loss arising from any use of this document or its contents.

This document may contain forward looking statements including statements regarding our belief or current expectations with regards to the performance of certain assets classes and/or sectors. Forward looking statements are subject to certain risks, uncertainties and assumptions. There can be no assurance that such statements will be accurate and actual results could differ materially from those anticipated in such statements. WisdomTree strongly recommends that you do not place undue reliance on these forward-looking statements.

WisdomTree Issuer X Limited

The products discussed in this document are issued by WisdomTree Issuer X Limited (the “Issuer”). Investors should read the prospectus of the Issuer before investing and should refer to the section of the prospectus entitled “Risk Factors” for further details of risks associated with an investment in the securities offered by the Issuer.

Securities issued by the Issuer are direct, limited recourse obligations of the Issuer alone and are not obligations of or guaranteed by any of Swissquote Bank Ltd (“Swissquote”), Coinbase Custody Trust Company LLC (“Coinbase”), any of their affiliates or anyone else or any of their affiliates. Each of Swissquote and Coinbase disclaims all and any liability whether arising in tort, contract or otherwise which it might have in respect of this document or its contents otherwise arising in connection herewith.

The product discussed in this document is an unregulated ETP, approved to trade on the SIX Swiss Exchange in Switzerland, Euronext Paris, Euronext Amsterdam and the Deutsche Börse Xetra in Germany. Cryptocurrencies are a high-risk investment and may not be suitable for all types of investor. Prospective investors should be aware that the price of the underlying asset(s) by which the securities are secured can demonstrate higher volatility than other asset classes and consequently the value of the securities may be extremely volatile. You must ensure that the nature, complexity and risks associated with cryptocurrencies are suitable for your objectives in light of your circumstances and financial position.

CF BENCHMARKS LTD DATA IS USED UNDER LICENSE AS A SOURCE OF INFORMATION FOR CERTAIN WISDOMTREE PRODUCTS. CF BENCHMARKS LTD, ITS LICENSORS AND AGENTS HAVE NO OTHER CONNECTION TO WISDOMTREE PRODUCTS AND SERVICES AND DO NOT SPONSOR, ENDORSE,

RECOMMEND OR PROMOTE ANY WISDOMTREE PRODUCTS OR SERVICES. CF BENCHMARKS ITS LICENSORS AND AGENTS HAVE NO OBLIGATION OR LIABILITY IN CONNECTION WITH THE WISDOMTREE PRODUCTS AND SERVICES. CF BENCHMARKS ITS LICENSORS AND AGENTS DO NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF ANY INDEX LICENSED

TO WISDOMTREE AND SHALL NOT HAVE ANY LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS THEREIN.

Notice to Investors in Switzerland – Qualified Investors

This document constitutes an advertisement of the financial product(s) mentioned herein.

The prospectus and the key investor information documents (KIID) are available from WisdomTree's website: **https:** //www.wisdomtree.eu/en-ch/resource-library/prospectus-and-regulatory-reports

For Investors in Monaco: This communication is only intended for duly registered banks and/or licensed portfolio management companies in Monaco. This communication must not be sent to the public in Monaco.