

Q4 State of Crypto: Market Pulse

January 2024

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Key Takeaways

Market Pulse is a compilation of key charts and insights by Binance Research, shedding light on the state of crypto.



Overview

Q4 marked a positive turnaround for the crypto industry as institutional interest grew and sentiment turned positive over the impending spot BTC ETF approvals. Market capitalization increased by 54.4% QoQ.



Layer 1s & 2s

L2s continued to gain traction and popularity, with various service providers offering rollup stacks that make it easy for developers to deploy their own customized chains.



DeFi

Total value locked (“TVL”) in DeFi increased 38.9% QoQ to US\$53.4B, contributed by risk-on sentiment displayed through heightened activity for meme coins, and airdrop farming, among others.



NFTs

Euphoria in the overall market spilled into the NFT sector. Ordinals-based Bitcoin NFTs gained the most traction, taking up the top spots in terms of volume traded.

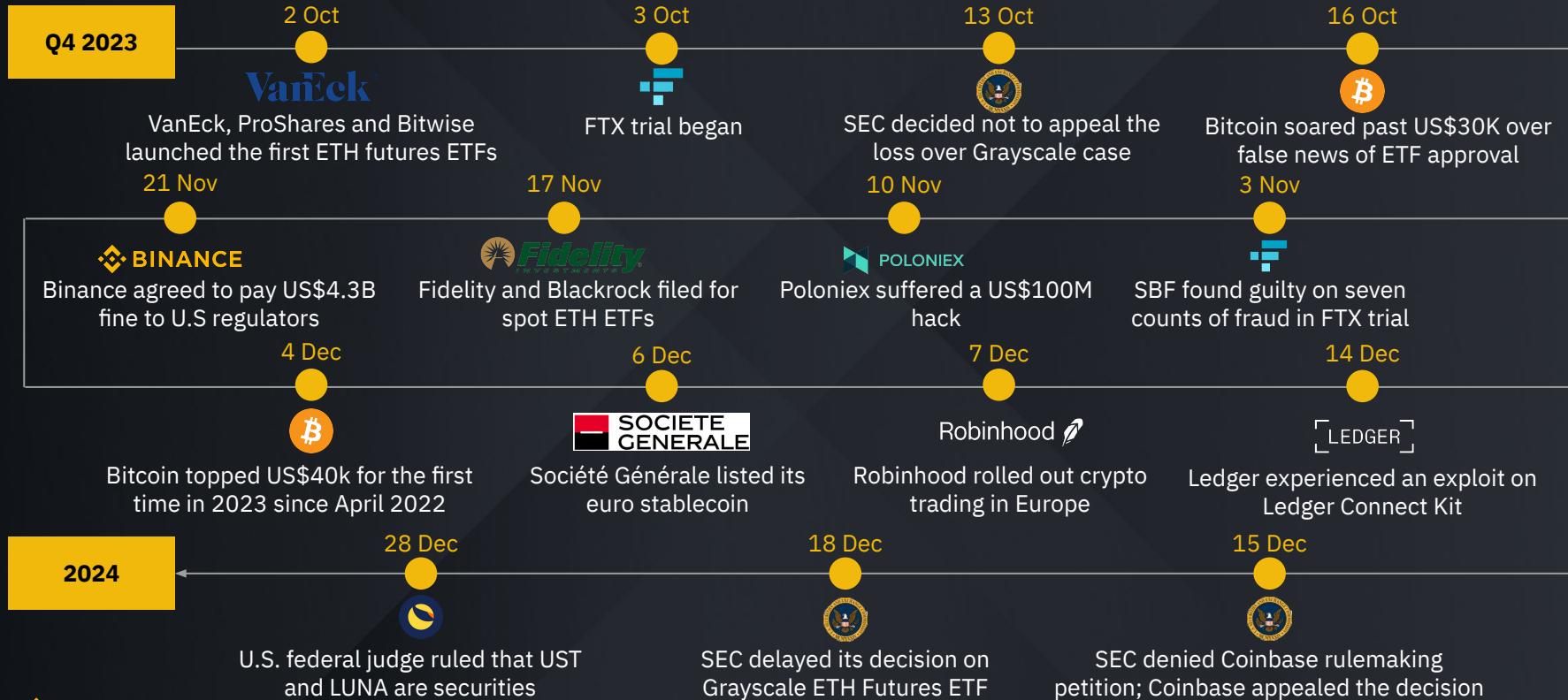


Gaming

The gaming landscape was led by BNB Chain, Ethereum, and Polygon, with around 66% market share (by number of games).

Market Overview

Notable Events in Q4



Source: Binance Research. Data as of 31 December 2023.

Crypto Market Overview

Market capitalization **increased** in Q4

Global Crypto Market Capitalization



Increase of +54.4% QoQ

- In Q4, with the growing optimism and anticipation of a potential spot BTC ETF approval, the market notched a significant gain of 54.4% QoQ.
- Macro tailwinds including expectations for rate cuts in 2024 have also contributed to positive growth for risk assets such as cryptocurrency.

Performance of Largest Coins by Market Cap

The top 3 coins held their spot in 2021, 2022 and 2023

Price Performance of the Top 10 Coins

	2017	2018	2019	2020	2021	2022	2023
Decreasing Market Cap ↓	Bitcoin 1317.08%	Bitcoin -72.39%	Bitcoin 92.48%	Bitcoin 308.91%	Bitcoin 59.70%	Bitcoin -64.42%	Bitcoin 156.40%
	XRP 34096.50%	XRP -84.11%	Ethereum -2.99%	Ethereum 478.27%	Ethereum 397.84%	Ethereum -68.17%	Ethereum 91.50%
	Ethereum 8762.26%	Ethereum -81.94%	XRP -45.46%	XRP 24.75%	BNB 1258.62%	BNB -54.25%	BNB 27.93%
	Bitcoin Cash 451.97%	Bitcoin Cash -93.21%	Bitcoin Cash 26.19%	Litecoin 217.79%	Solana 10682.40%	XRP -59.68%	Solana 923.06%
	Cardano 3400%	EOS -66.60%	Litecoin 37.44%	Polkadot 188.93%	Cardano 620.39%	Dogecoin -56.45%	XRP 81.83%
	Litecoin 5019.14%	Stellar -73.92%	EOS 1.34%	Bitcoin Cash 73.63%	XRP 251.18%	Cardano -81.21%	Cardano 142.38%
	IOTA 867.48%	Litecoin -86.39%	BNB 130.73%	Cardano 452.21%	Terra Classic 13310.47%	Polygon -68.92%	Avalanche 256.31%
	NEM 29070.31%	Bitcoin SV 5.84%	Bitcoin SV 9.60%	BNB 180.23%	Avalanche 3408.97%	Polkadot -84.90%	Dogecoin 28.08%
	Dash 9377.84%	Tron -57.00%	Tezos 194.10%	Chainlink 542.13%	Polkadot 197.82%	Tron -29.53%	Polkadot 91.17%
	Stellar 17666.95%	Cardano -94.15%	Stellar -60.09%	Bitcoin SV 72.34%	Dogecoin 3389.64%	Litecoin -54.24%	Tron 98.31%



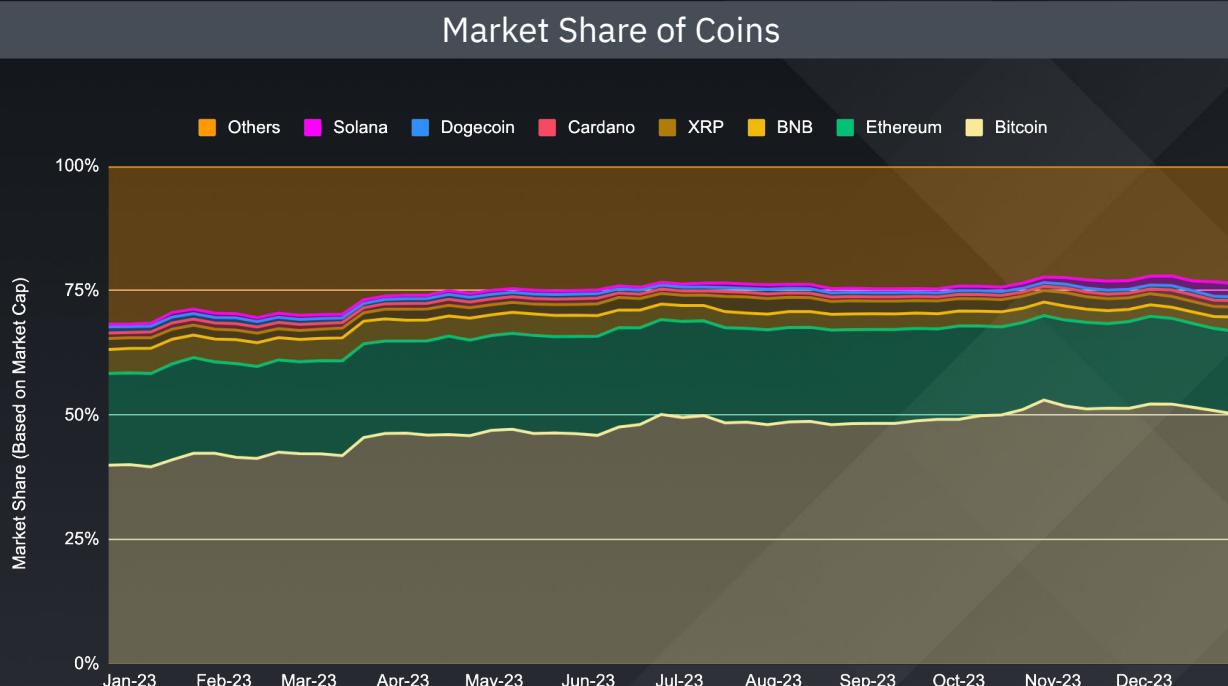
Solana rose from the ashes

- Solana was the standout performer among the top 10 cryptocurrencies in 2023, boosting a remarkable 923.1% gain supported by its recent developments such as v1.16 client release on September 23 and the announcement of Firedancer's successful testnet launch during the Breakpoint conference.
- Bitcoin outperformed Ethereum as anticipation grew over the impending spot BTC ETFs approvals. Bitcoin activity has also seen an uptick driven by Ordinals trading.

Market Share of Coins

Slight **increase** in BTC dominance

Market Share of Coins



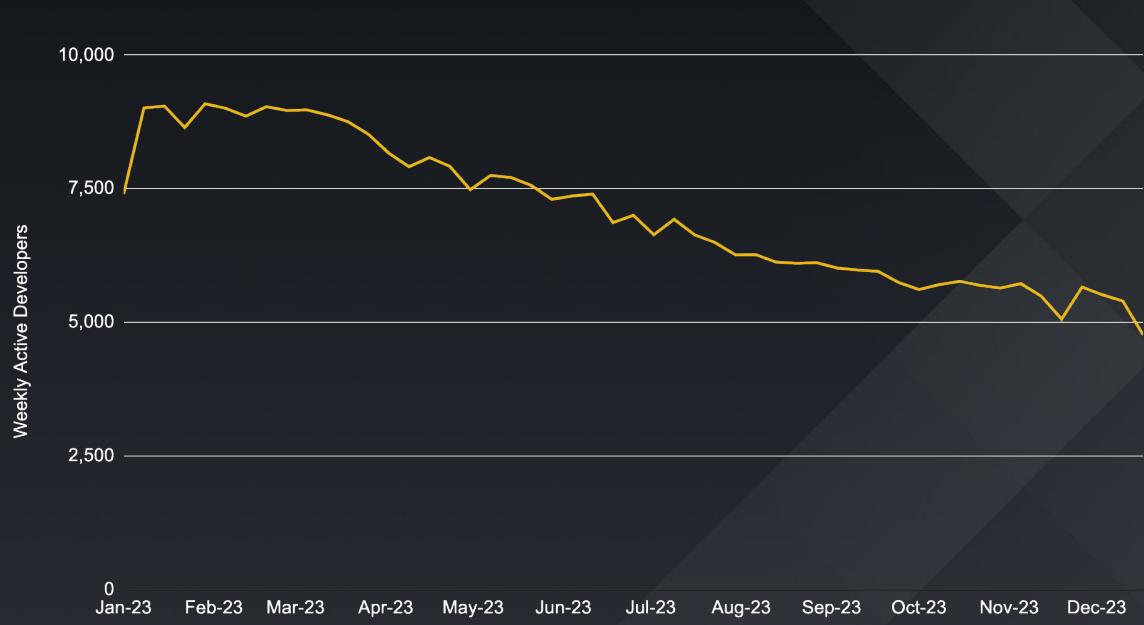
+1.2% QoQ for BTC

- With the focus shifting to BTC in 2023 due to greater institutional adoption and anticipation of the Bitcoin halving, Ethereum has seen a decline in dominance. The upcoming Ethereum Dencun upgrade and discussions of possible spot ETH ETFs may introduce new dynamics.
- With Solana's Firedancer client expected to go live in Q2 2024 and networks such as NeonEVM bridging the gap between Ethereum and Solana, it will be interesting to watch how the landscape evolves in 2024.

Developer Activity

Overall **decline** QoQ, but with pockets of growth

Weekly Active Developers



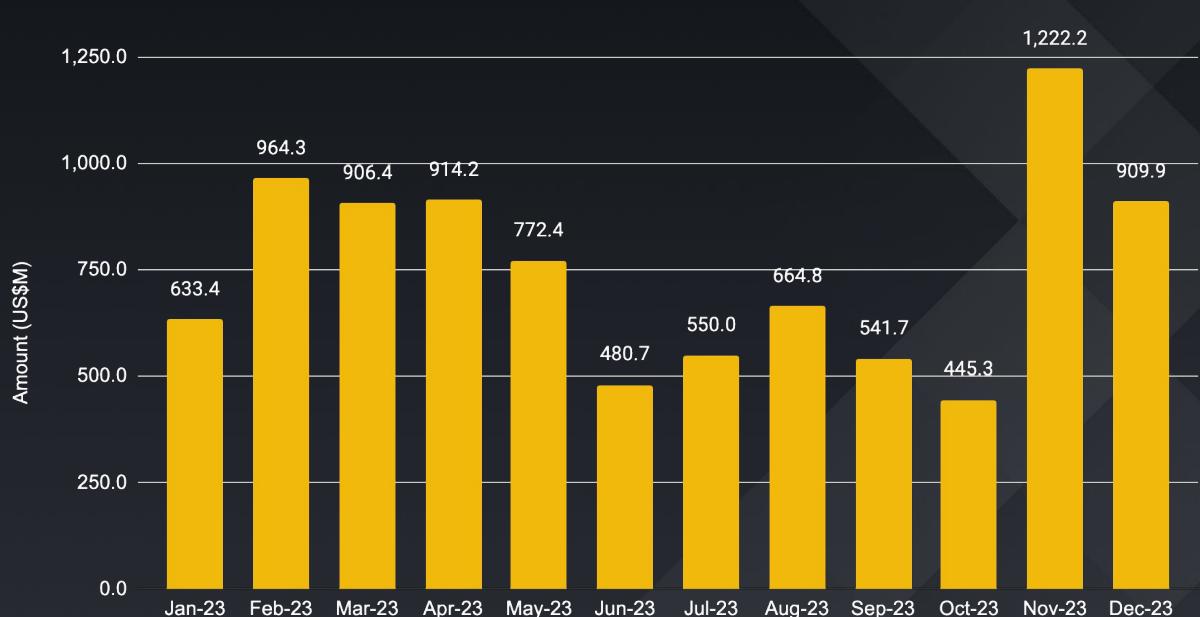
3rd consecutive quarterly decline in developer activity

- Weekly active developer count has been steadily decreasing.
- However, certain projects continue to draw developers, with Starknet and zkSync witnessing a quarterly growth in weekly developers of 8.1% and 15.2% respectively.
- Developer retention on Solana grew to more than 50% in December, supported by the positive narrative around its ecosystem in recent months.

Crypto Fundraising

Amount of funds raised in Q4 highest in 2023

Monthly Fundraising Amount



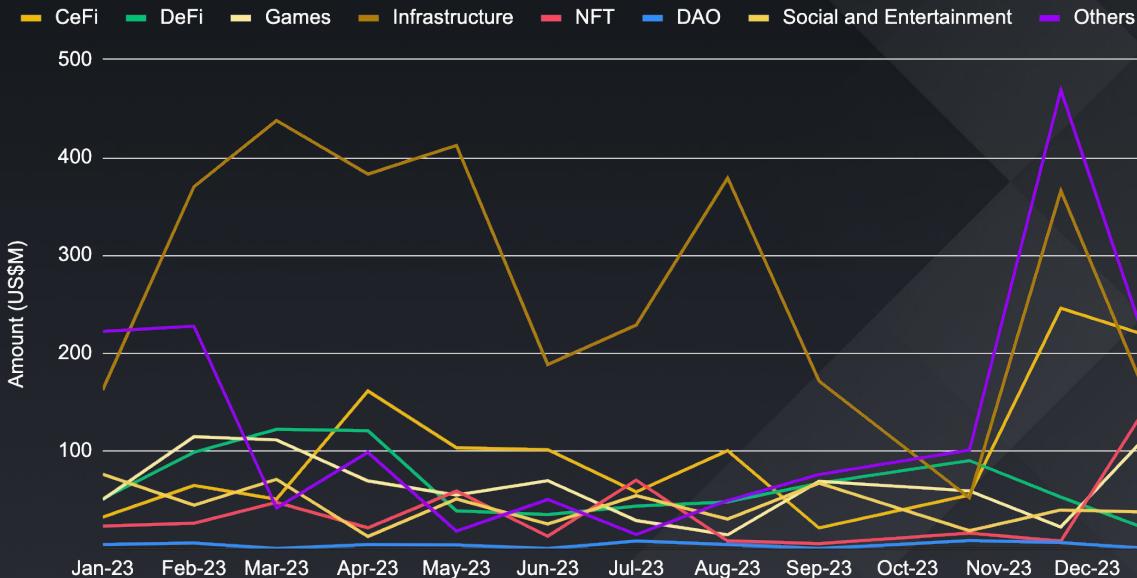
Rejuvenated fundraising activity

- Investment appetite reignited in Q4 2023, as fundraising activities saw a resurgence. Funds raised in Q4 surpassed US\$2.5B, marking the strongest quarter in 2023. Notably, November also recorded the most funds raised in 2023.
- Reputable projects' fundraising include Wormhole's US\$225M raise and MapleStory Universe's US\$100M raise, among others.

Crypto Fundraising by Sectors

Infrastructure remains a bright spot

Funds Raised by Sectors



Infrastructure held the top spot in Q4 again

- Infrastructure raised the most funds in Q4, 2023. Notable deals include Wormhole's US\$225M raise at a US\$2.5B valuation, an indication of growing demand for cross-chain interoperability solutions.
- Gaming remains popular among investors as optimism over the mass adoption of AAA games increases. Shrapnel, a fully on-chain AAA FPS game, raised US\$20M.

Crypto Fear & Greed Index

The index **rose** as optimism increased



+25.7 points in Q4

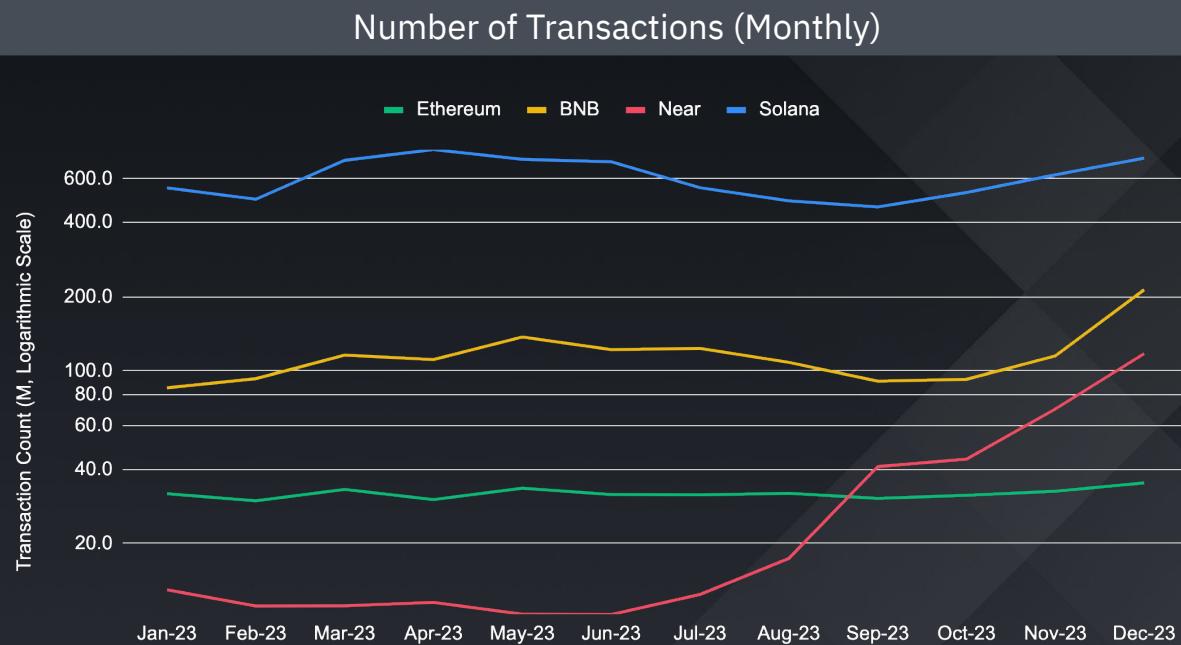
- Market sentiment took a swift turn from neutral to greed in Q4 as the market prepared for an industry-wide rebound led by the impending approval of spot BTC ETFs.
- The launch of several airdrops such as Celestia and Jito in Q4 delivered hefty profits for market participants, leading to increased market activity and on-chain engagement.

Layer 1s



Monthly Transactions by Chain

All chains experienced renewed activity in Q4



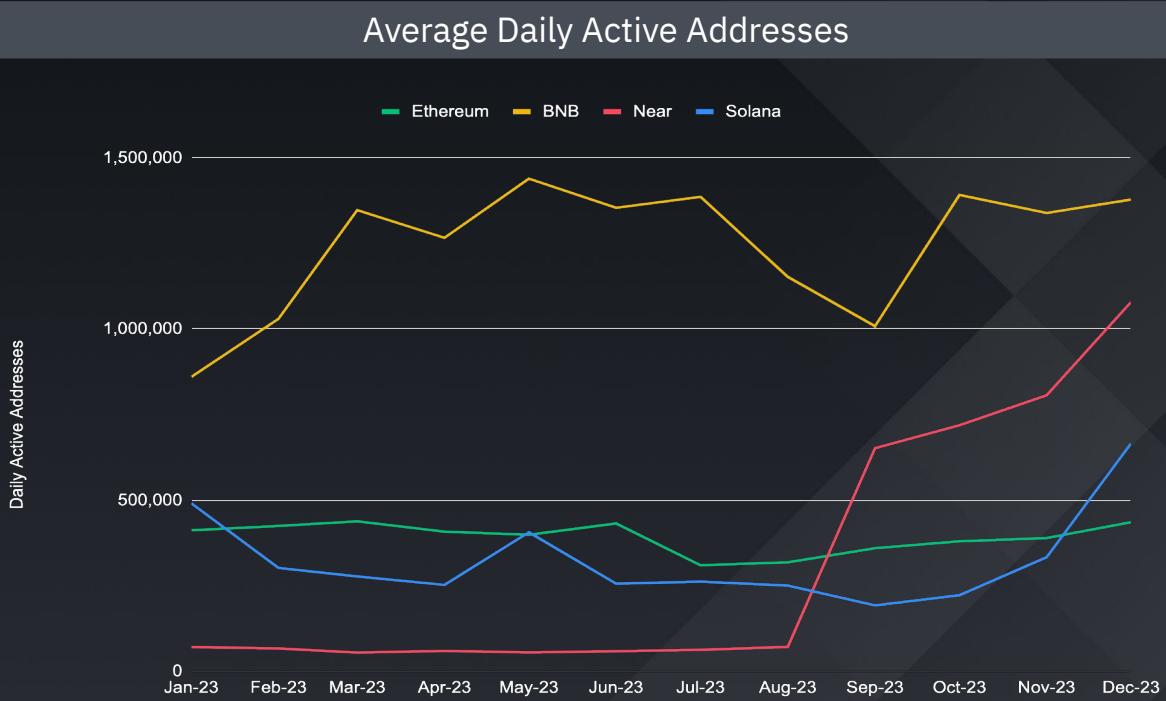
Solana regained popularity in Q4

- With the launch of the JTO airdrop, activity spiked on the Solana network supported by other impending airdrops such as Jupiter.
- Rising popularity of inscriptions also drove the exponential growth in transaction counts on NEAR and BNB chain.

Average Daily Active Addresses by Chain

Active addresses have generally increased

Average Daily Active Addresses



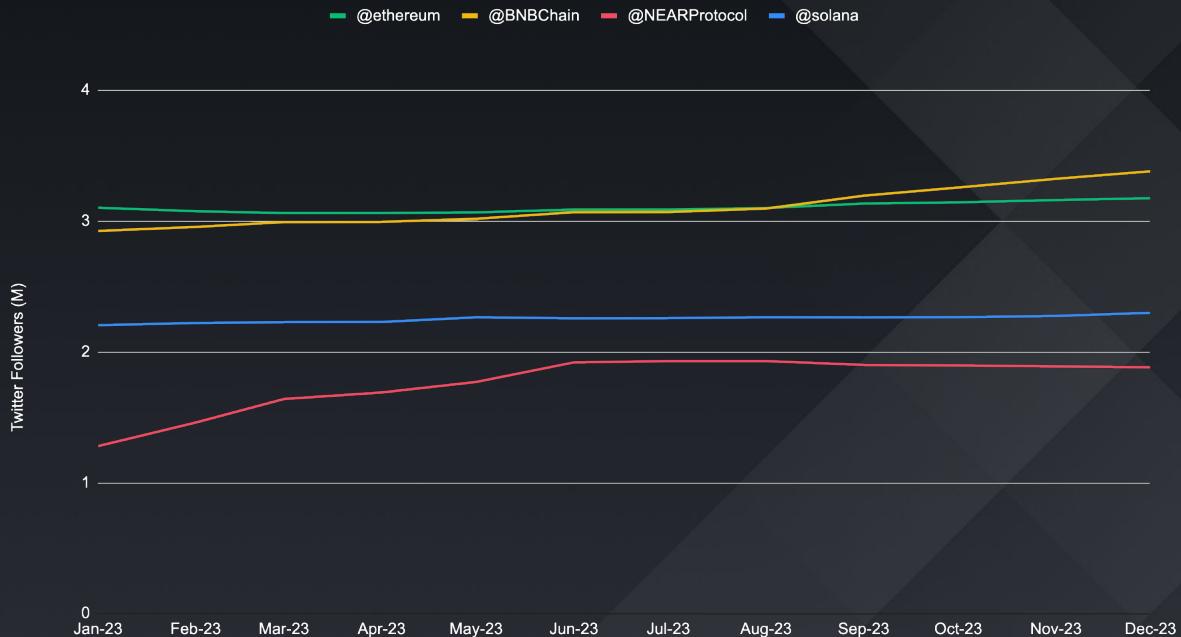
NEAR recorded a notable QoQ increase

- In addition to its array of notable partnerships and the launch of popular dApps such as Sweat Economy and KAIKAI NOW, NEAR has also introduced NEAR Data Availability in Q4.
- Near DA is a cost efficient data availability layer that is compatible with L2s, purportedly offering 11,000x cheaper DA fees than Ethereum and 30x cheaper than Celestia.

Twitter Followers

BNB Chain takes the top spot as the most followed chain

Cumulative Twitter Followers by Official Blockchain Accounts

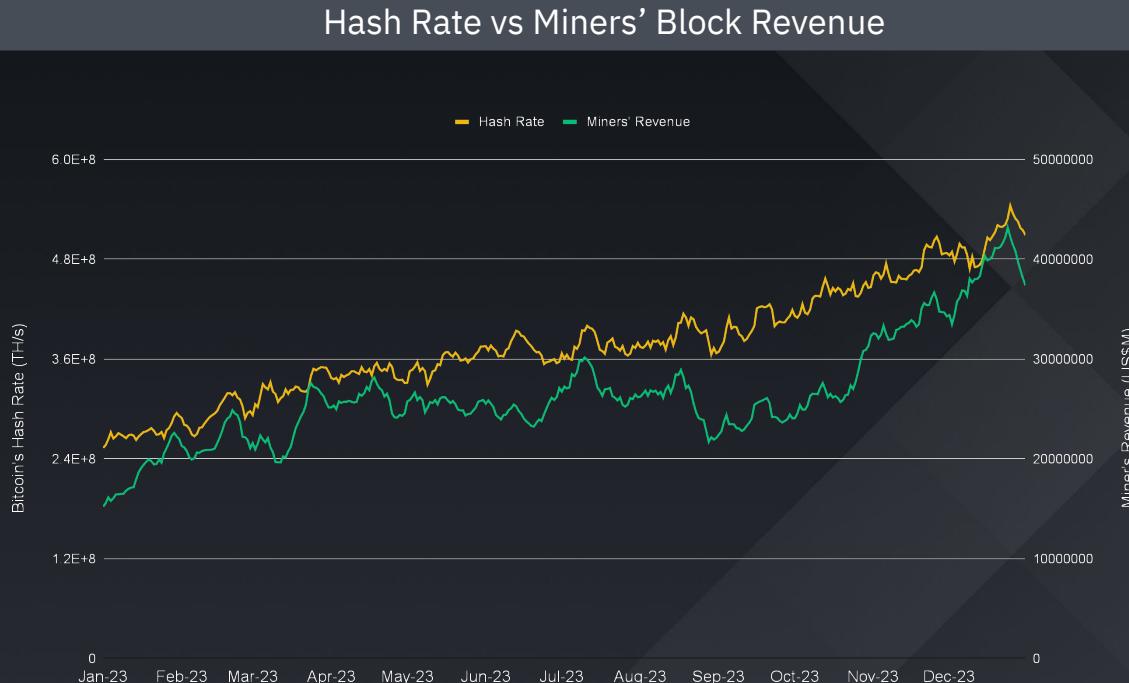


@BNBChain leads, overtaking @ethereum

- With over 3.3M followers, @BNBChain has surpassed @ethereum, which boasts approximately 3.2M followers

BTC: Hash Rate vs Miners' Block Revenue

Miners' revenue from block rewards to be halved soon

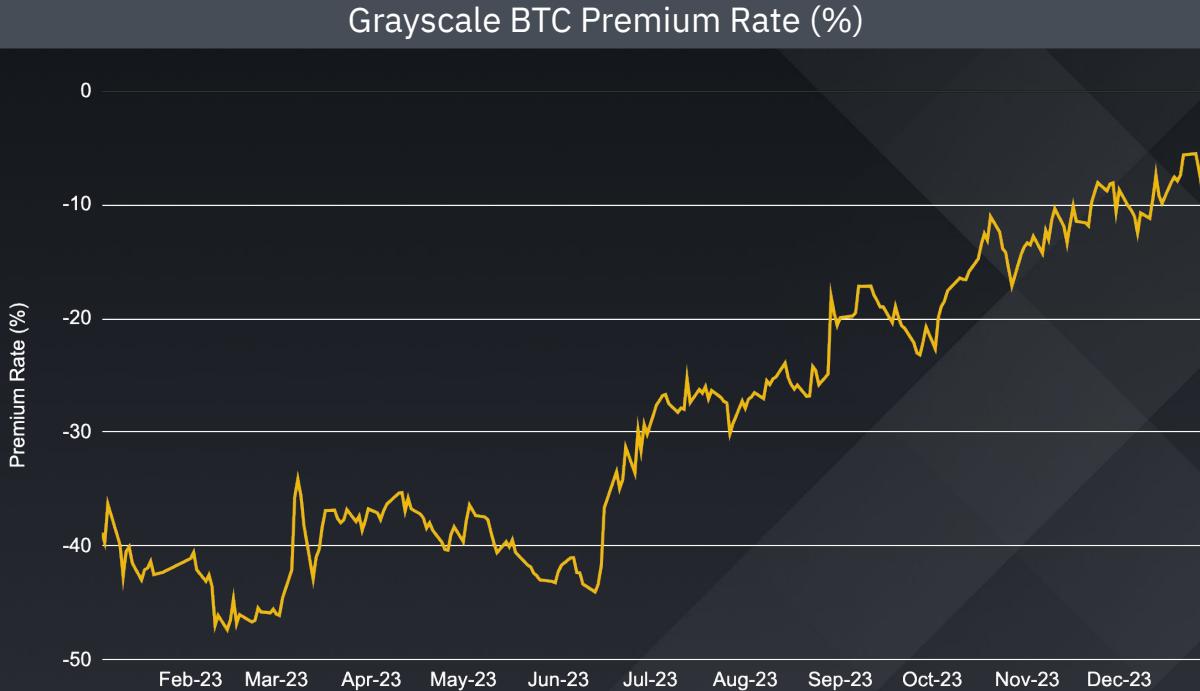


Hash rate recorded a new peak

- With the upcoming halving in April 2024 amidst the increasing hash rate, miners may see reduced profitability potentially leading to consolidation among those capable of managing the high operational costs of Proof of Work.
- Transaction fees were more than 12% of miners' revenue in November and December. This is a positive development as increase in transaction fees from inscriptions-related / BitcoinFi could help alleviate the reduction in revenue from block rewards.

BTC: Grayscale Bitcoin Trust (“GBTC”) Premium

The GBTC discount **narrowed** in Q4



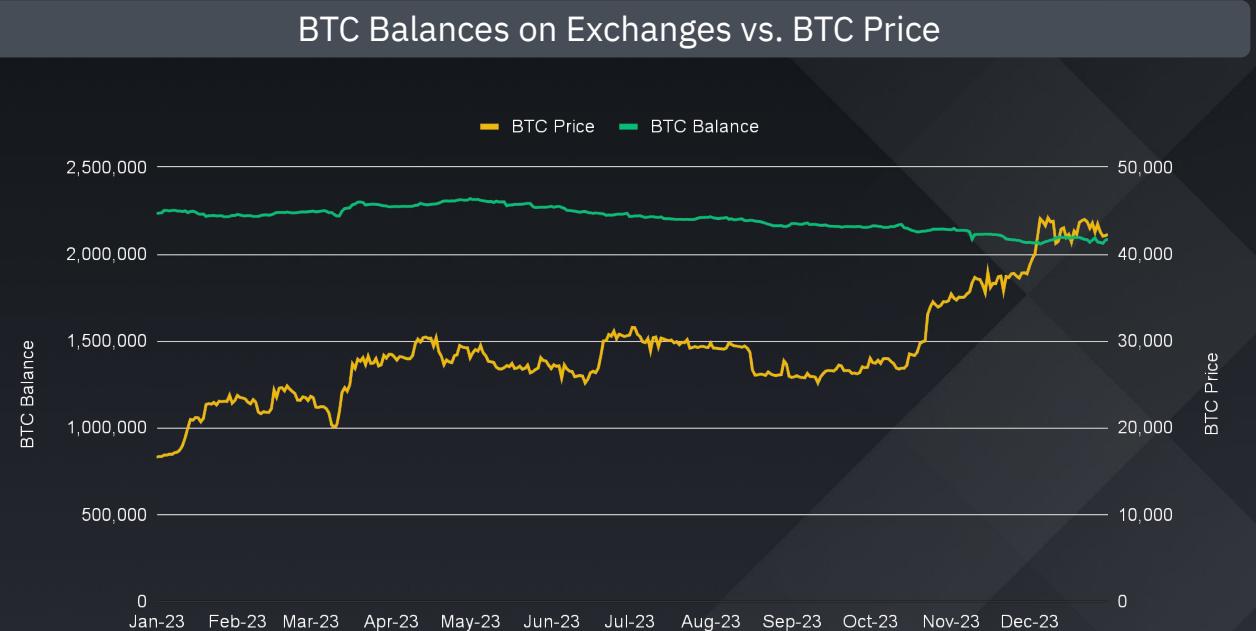
Discount to NAV:

- ◆ End of Q1-23: **-36.7%**
- ◆ End of Q2-23: **-30.2%**
- ◆ End of Q3-23: **-20.7%**
- ◆ End of Q4-23: **-8.1%**

- The GBTC discount has narrowed to its lowest level this year, propelled by market anticipation over the approval of BTC ETFs.
- The approval of BTC ETFs could also pave the way for potential spot ETH ETF approvals and the development of more complex derivative products.

BTC: Bitcoin Balance on Exchanges vs. Price

Balance on exchange hit the lowest level in Q4 2023.

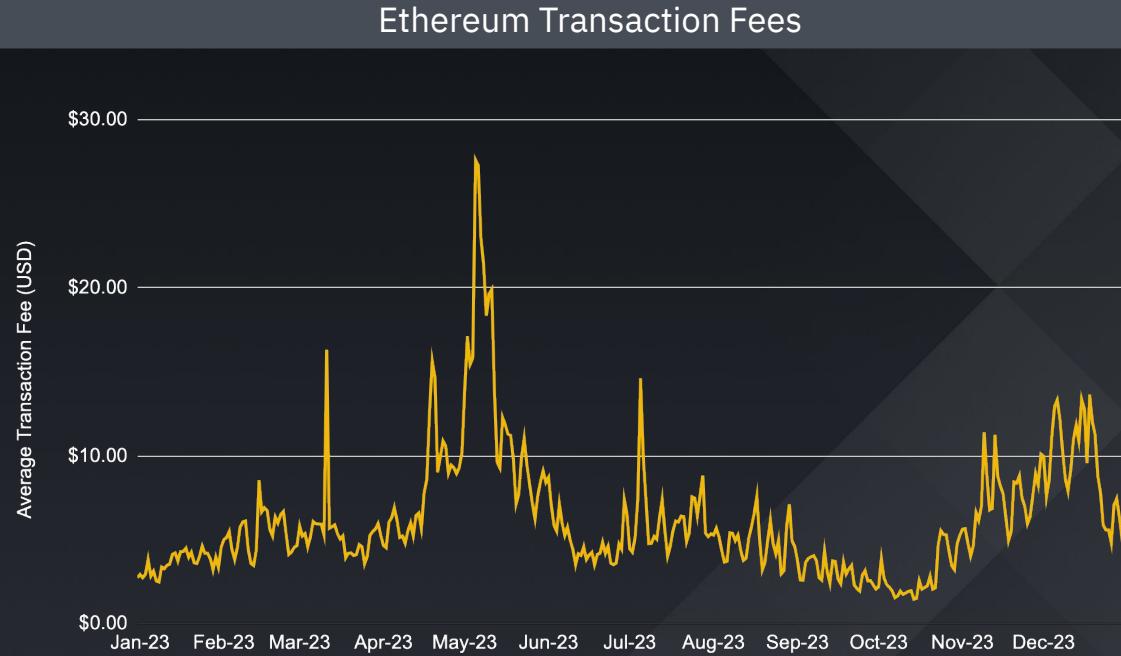


Renewed optimism in Bitcoin

- The Bitcoin balance on exchange reached its lowest level in Q4 2023 while price appreciation continues on an uptrend, making new highs for the year.
- This uptrend has resulted in over 80% of Bitcoin holders currently being in the money, according to data from IntoTheBlock, reaching multi-year highs.

ETH: Average Transaction Fees

Average Ethereum fees **increased** in Q4



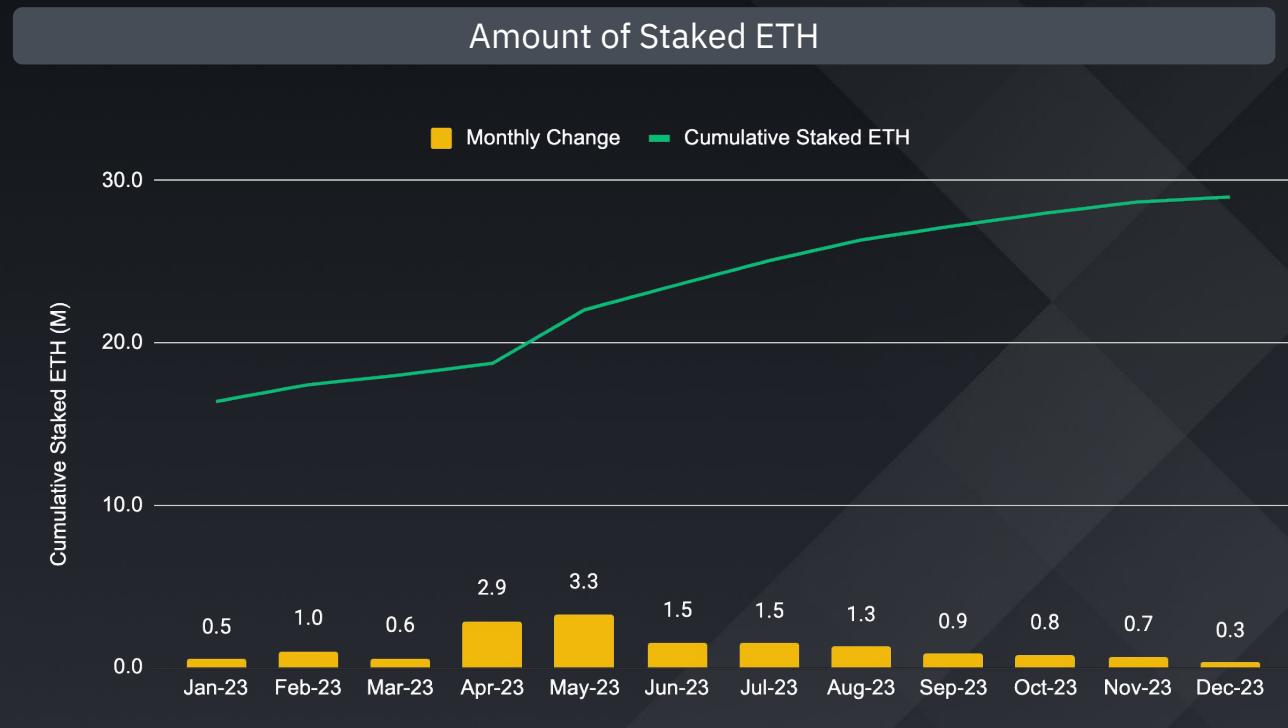
Average fee/transaction:

- ❖ Q1-23: **US\$4.8**
- ❖ Q2-23: **US\$8.8**
- ❖ Q3-23: **US\$4.8**
- ❖ Q4-23: **US\$6.4**

- Transaction fees rose slightly in Q4 2023 alongside an increase in network activity partly attributed to Vitalik Buterin-themed NFT collection that caused a brief spike in gas fees.
- Other contributors include heightened DeFi activity, renewed NFT interest, and airdrop farming activities.

ETH: Staked ETH Statistics

~24% of all ETH in circulation has been staked

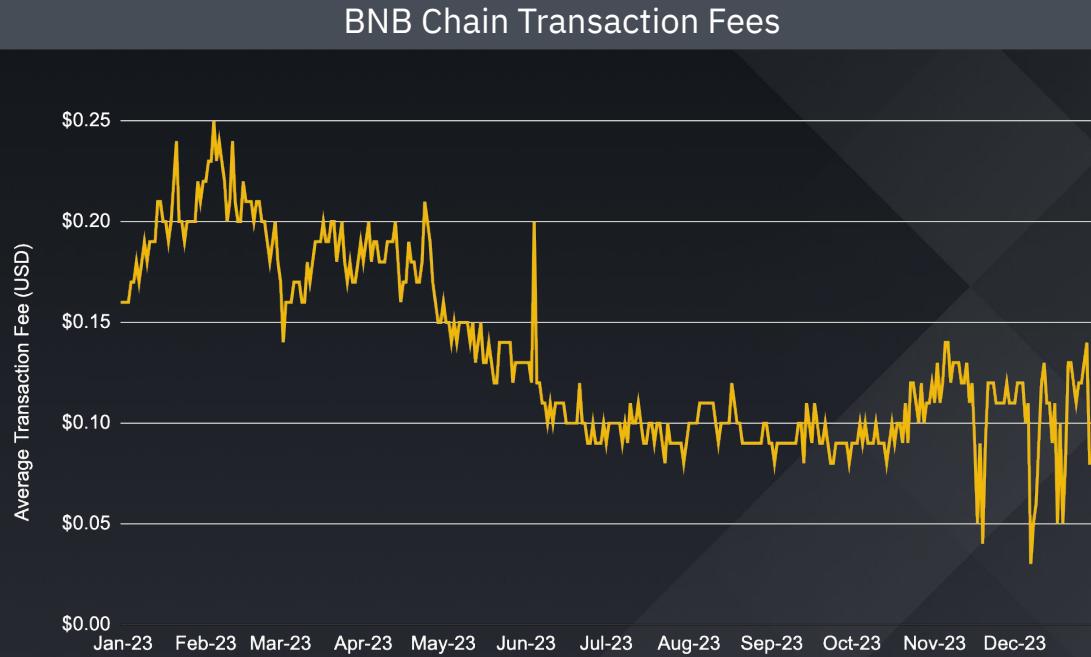


>29M ETH staked

- The amount of ETH staked has been steadily increasing, although the rate of growth has slowed down in recent months.
- With the introduction of restaking on EigenLayer and other native restaking platforms, ETH stakers and liquid staking token holders now have another avenue to generate additional yield on their holdings. It will be interesting to monitor how this space evolves.

BNB Chain: Average Transaction Fees

Average transaction fees stayed relatively flat in Q4 2023.



Average fee/transaction:

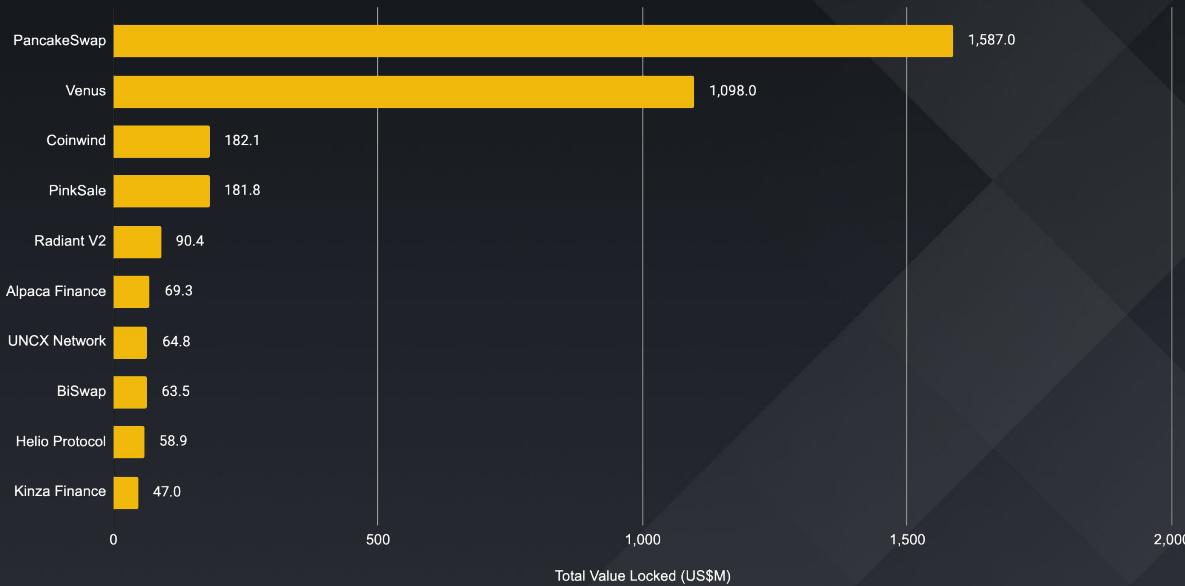
- ❖ Q1-23: **US\$0.19**
- ❖ Q2-23: **US\$0.14**
- ❖ Q3-23: **US\$0.09**
- ❖ Q4-23: **US\$0.10**

- There has not been any significant change in terms of transaction fees on BNB chain in Q4, following a period of relatively unchanged network activity.

BNB Chain: Top dApps by TVL

DEXes and lending remained the largest verticals

Top 10 dApps on BNB Chain (by TVL)



PancakeSwap remained the dominant dApp

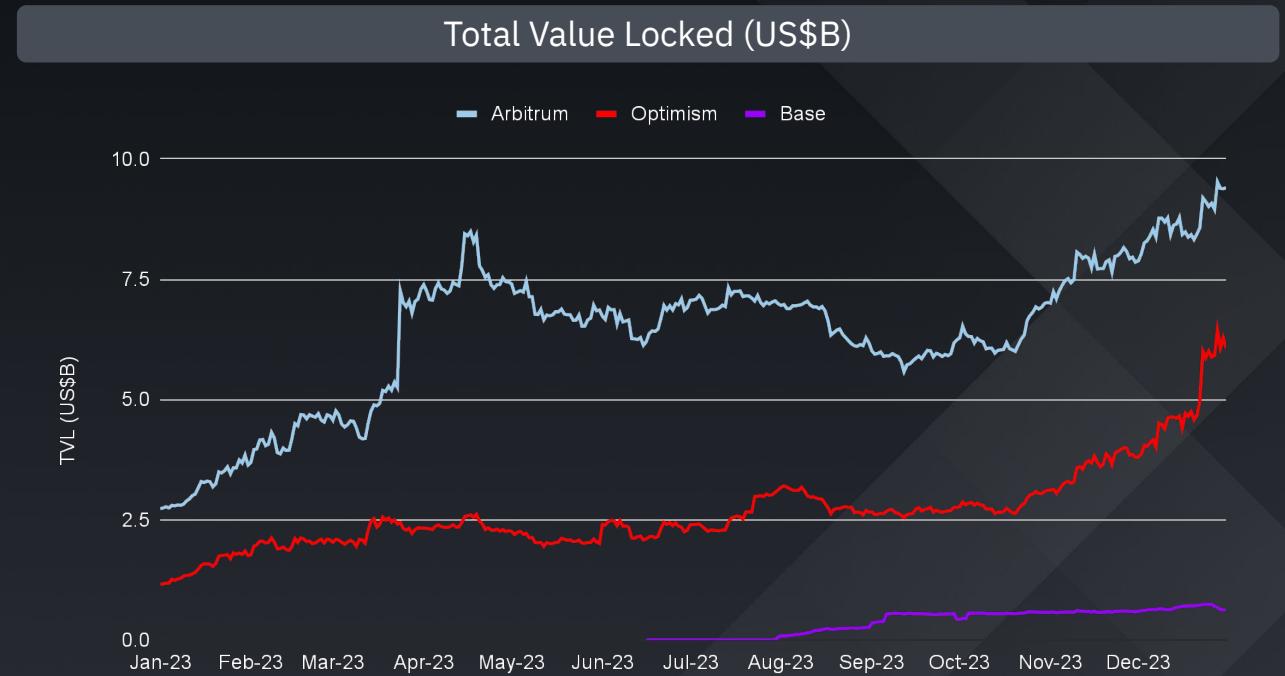
- PancakeSwap continues to lead as the top DeFi dApp on BNB Chain. The latest reduction in maximum supply of its native CAKE token is a notable development as the protocol looks to achieve deflationary tokenomics.
- The launch of Venus Prime in November aims to boost protocol growth by enhancing rewards and promoting staking of the lending protocol's native token, XVS. Since Q3, TVL on Venus has grown by 77.7%.

Layer 2s



Total Value Locked in Top L2s

Arbitrum, Optimism and Base are the top L2s

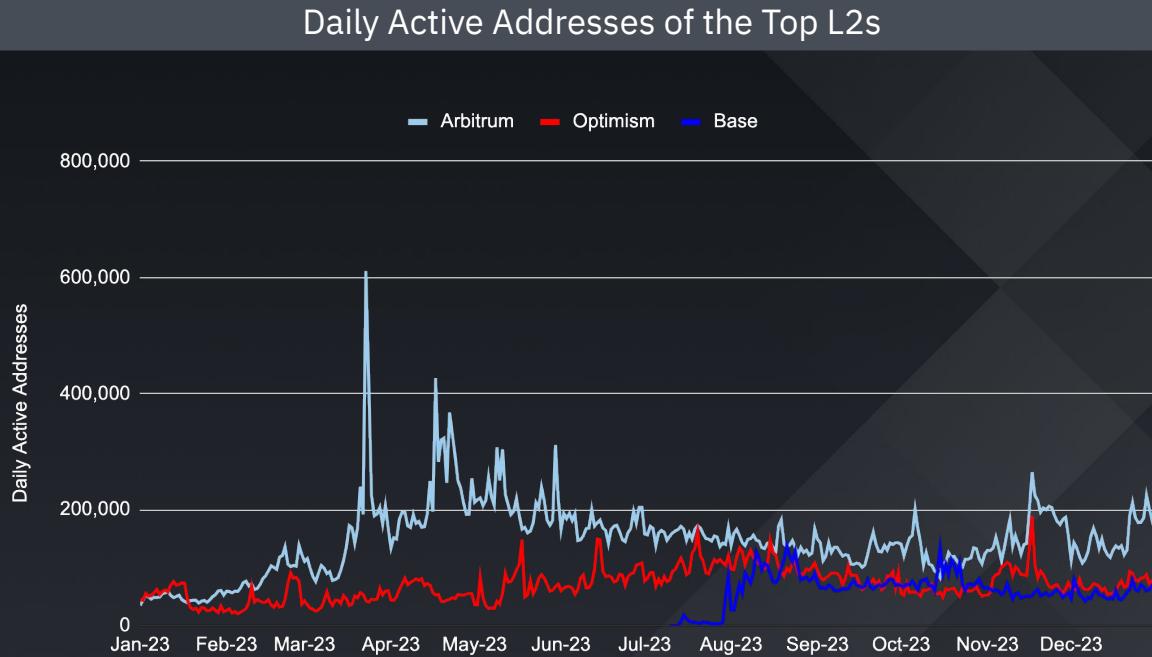


Arbitrum is inching towards US\$10B TVL

- While the top 3 spots are still taken by Arbitrum, Optimism and Base, Arbitrum has seen its market share increase whereas Base saw a decline.
- Outside of the top 3 L2s, newer chains are gaining momentum with Blast exceeding US\$1B in TVL. Additionally, Manta's New Paradigm Campaign and the IntoTheBlue airdrop have played a vital role in propelling it to the fourth largest L2 chain in terms of TVL.

Daily Active Addresses of the Top L2s

Arbitrum remains the top L2 network

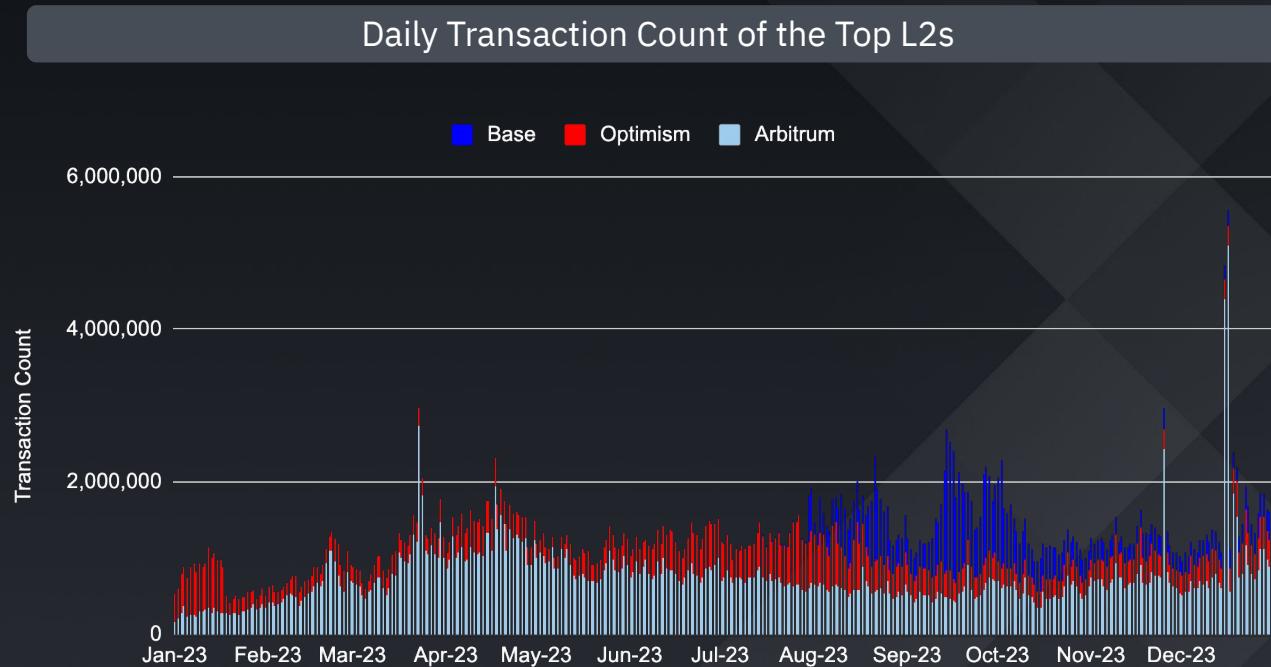


Arbitrum has the highest number of active addresses

- Arbitrum and Base notched increases in average daily active addresses, whereas OP Mainnet lagged in Q4.
- Average daily active address stood at 147K for Arbitrum, 72K for OP Mainnet, and 64K on Base, representing a +3.2%, -24.9% and +6.1% QoQ change respectively.

Daily Transaction Count

Transaction activity on Arbitrum remains sticky



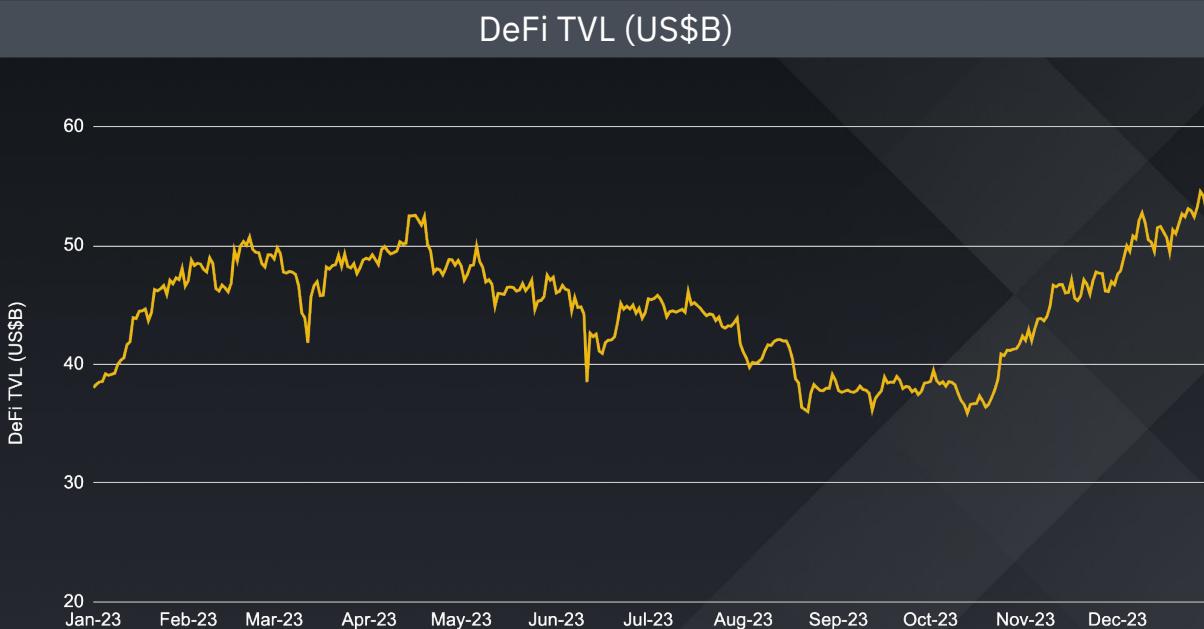
OP lagged behind Arbitrum and Base

- Due to a significant decline in average daily active addresses, the average daily transaction count has also fallen on OP Mainnet, resulting in an average of 4.09 transactions per address.
- This pales in comparison to its peers, with Base boasting 5.12 transactions per address and Arbitrum leading with 5.46 transactions per address.

DeFi

DeFi TVL

DeFi TVL **grew** in Q4



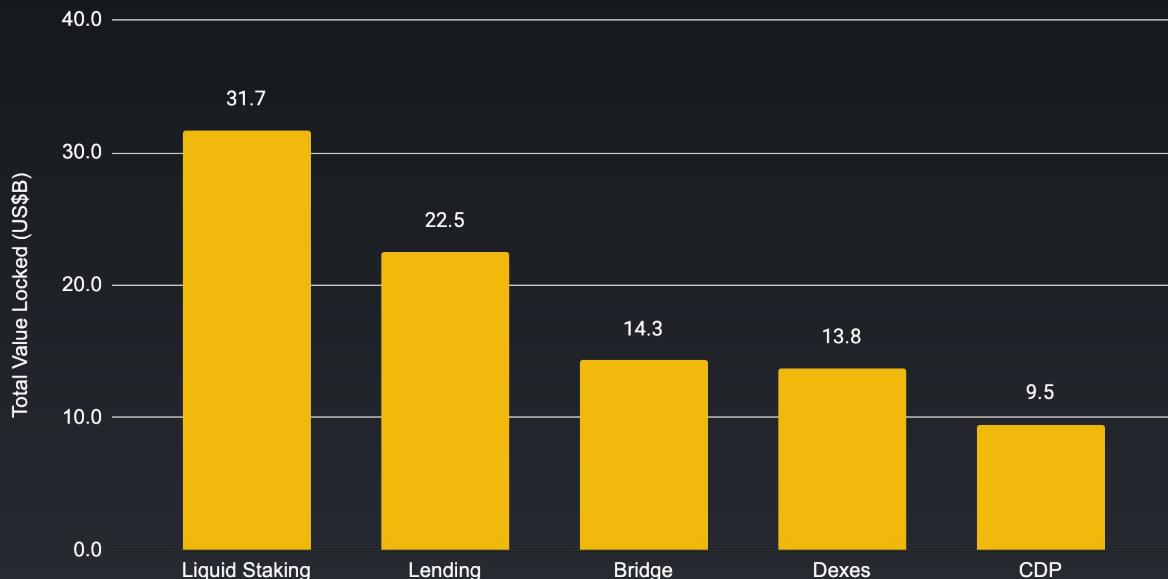
+38.9% growth QoQ

- TVL within the DeFi ecosystem staged a rebound in Q4 alongside the broad market rally.
- DeFi liquid staking protocols such as Swell Network experienced significant growth in activity following EigenLayer's decision to raise global LST ETH deposit caps to 500k and introduce swETH along with 5 other LSTs into its ecosystem.
- Lending has also seen significant growth with protocols such as Aave and Compound recording QoQ increase of 36.5% and 19.3% respectively.

Top 5 DeFi Sectors

Liquid staking sees renewed interest

TVL Of The Top 5 DeFi Sectors



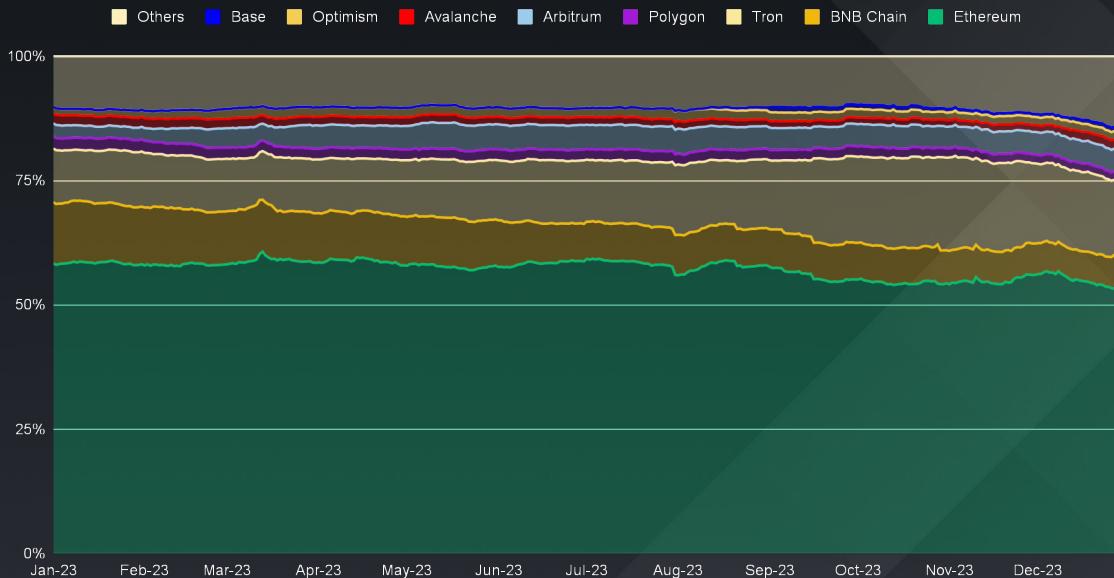
Liquid staking remains #1

- Liquid Staking witnessed renewed interest outside of Ethereum, particularly after Jito's airdrop on Solana. Emerging protocols such as MilkyWay Zone on Celestia have announced future airdrops for stakers, with the protocol seeing more than US\$20M in TVL since launching on 18 December.

TVL by Blockchain

Solana more than doubled its TVL in Q4

DeFi TVL Market Share by Chain



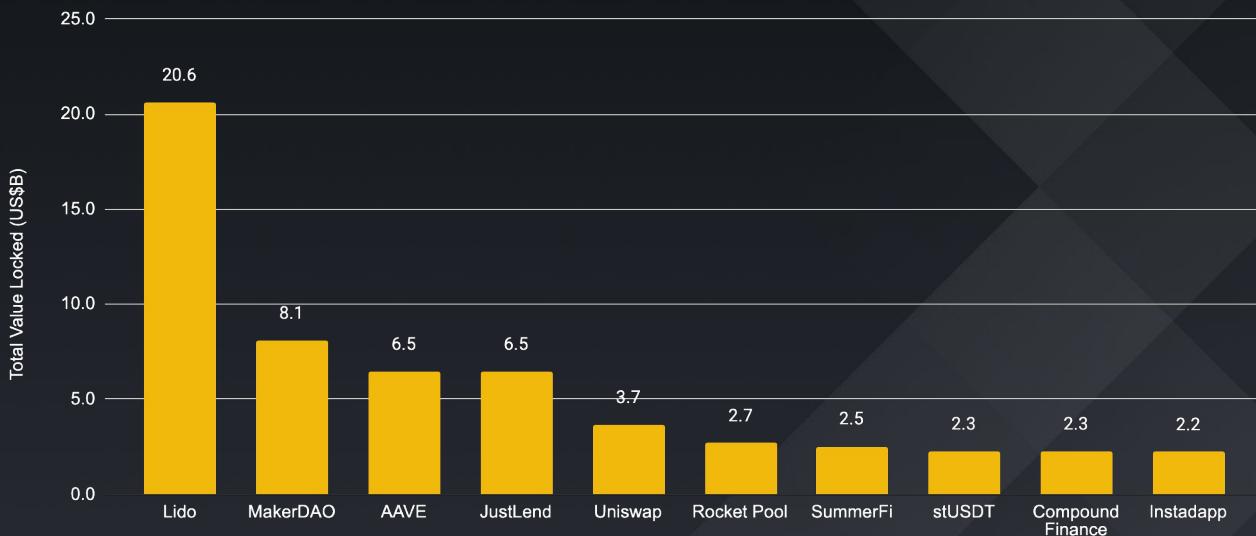
Solana in the spotlight

- Solana's DeFi TVL dominance grew from 0.84% in Q3 to 2.68% in Q4.
- Key drivers for Solana: Positive price action of SOL, memecoin trading (e.g., BONK), and activity driven by airdrop hunters. With its upcoming Firedancer client integration, Solana is expected to see reduced latency and higher throughput.
- The upcoming EIP-4844 upgrade on Ethereum would be a key development to watch as we observe how competition between the 2 L1s will pan out.

Top DeFi dApps by TVL

Lido extended its lead over other DeFi dApps

Top 10 DeFi dApps

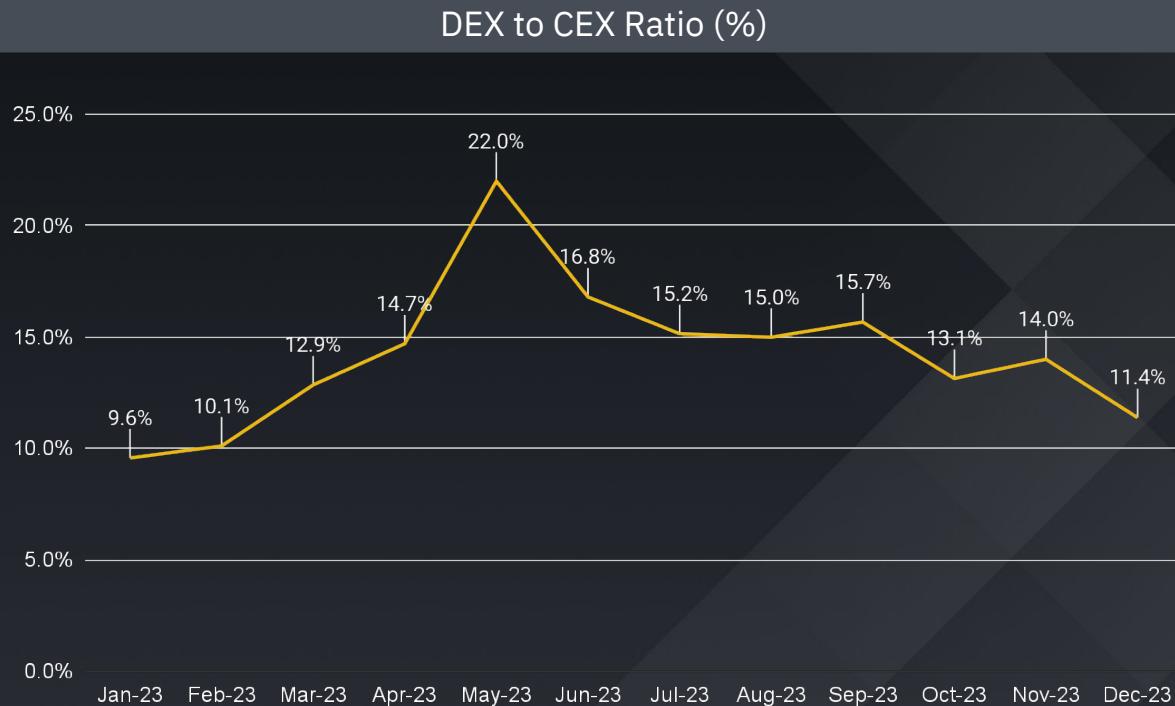


Lido consolidated its lead

- Since our last report, TVL on Lido has grown by 40.1% QoQ.
- MakerDAO, the issuer of DAI, has also leapfrogged AAVE and JustLend in terms of TVL since last quarter. With the introduction of lending protocol, Spark, in 2H 2023, demand for DAI has increased due to the attractive yields of ~5% for deposited DAI.

DEX/CEX Trading Volume

The DEX/CEX ratio was slightly **lower** at the end of Q4



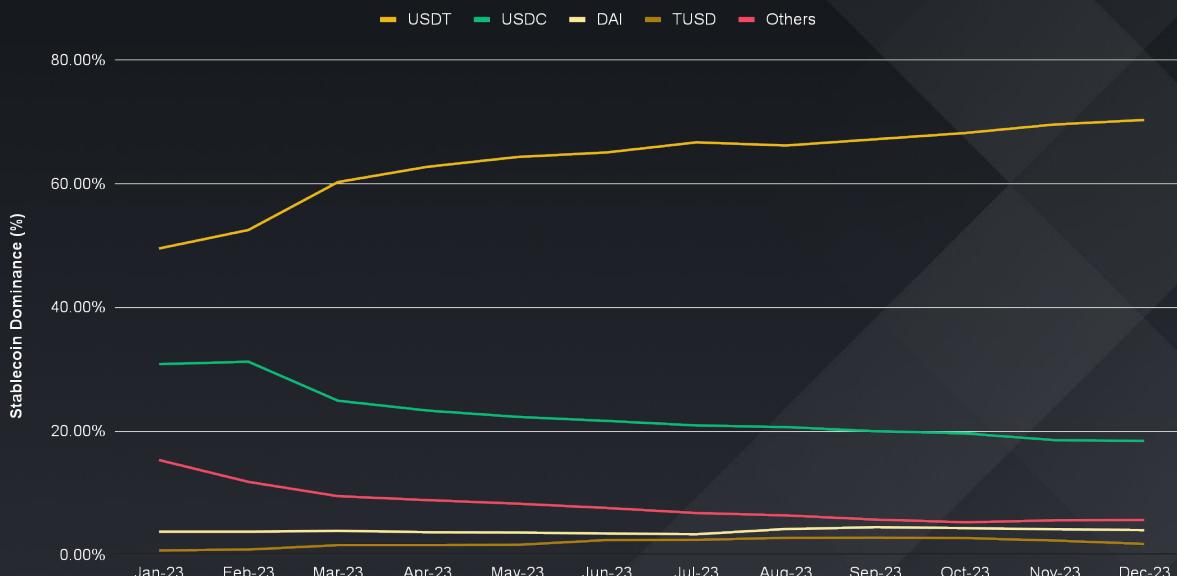
-4.3% (absolute) in Q4

- While the DEX/CEX ratio has declined in Q4, the volume of DEX trading volume has seen healthy growth in absolute terms.
- The average monthly spot DEX volume grew by an impressive 79.9% QoQ.

Stablecoin Market Share

USDT continues **gaining** ground

Stablecoin Market Share (By Market Cap)



USDT saw gains in market share

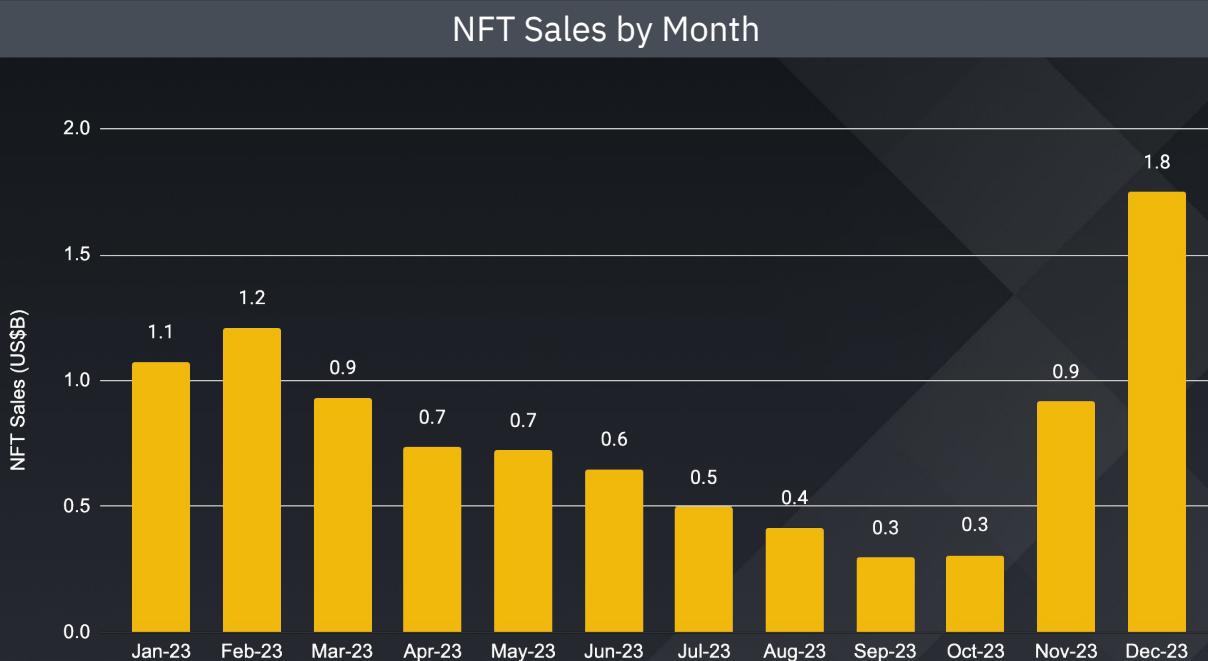
- On a QoQ basis, USDT saw its market share grow from 67.2% to 70.3%, while USDC continues to lose market share amid the challenges of navigating an uncertain regulatory environment.
- FDUSD, supported by attractive yields on Binance Simple Earn, a favorable zero trading fees campaign, and the phasing out of BUSD, soared from having 0.49% market share on Ethereum as of Q3 2023 to 2.32% market share to end the year.

NFTs



Total NFT Sales

Sales **rose** in Q4, marking a revival in the NFT market



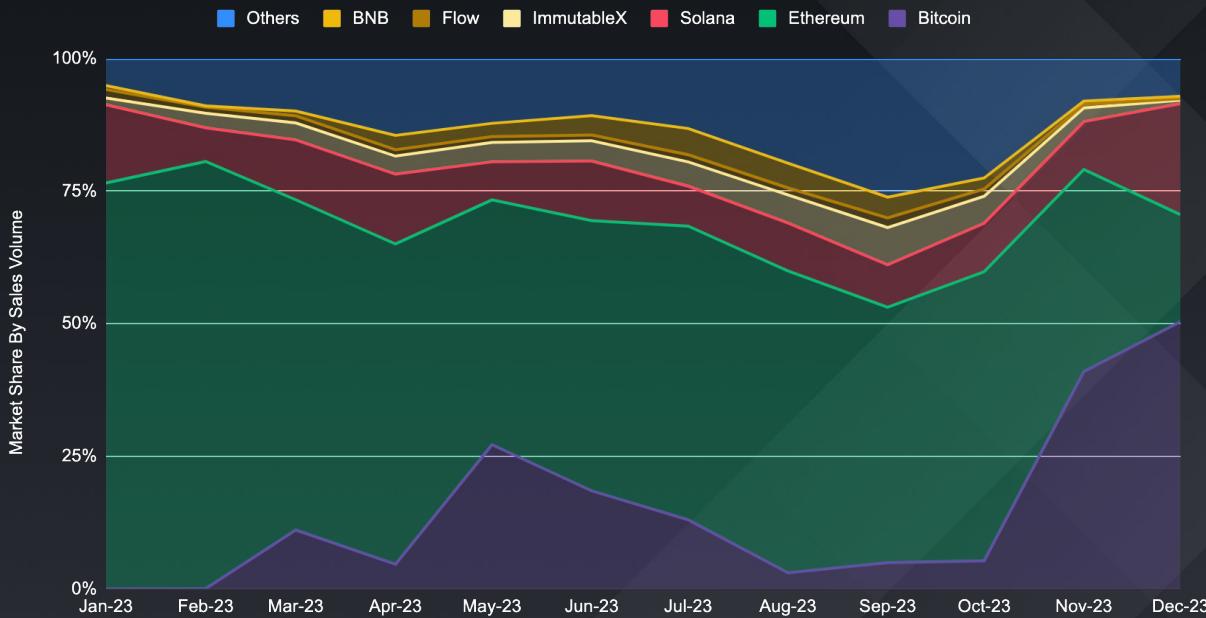
Q4 2023 marked a turnaround for NFTs

- NFT sales in Q4 notched gains of 150%, largely caused by increased activity across Bitcoin, Ethereum and Solana.
- This resurgence was driven by a surge on Blur, which led the recovery among Ethereum marketplaces, as well as a renewed interest in Bitcoin NFTs. Meanwhile, on Solana, the popular NFT collection Mad Lads saw its floor price more than double on a QoQ basis following Backpack's exchange preparation announcement.

NFT Sales Volume by Blockchain

Ordinals NFT rising in popularity

NFT Sales by Chain



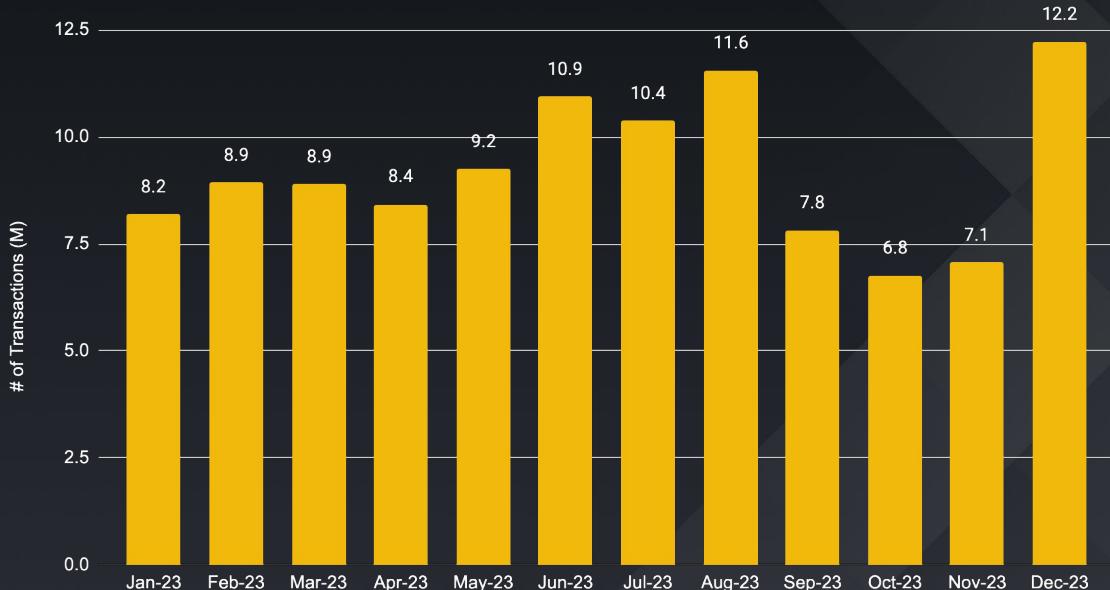
Bitcoin NFT, nascent yet rapidly booming

- In Q4, NFT sales volume was predominantly driven by Bitcoin NFTs.
- Solana also experienced an increase in sales volume, surpassing Ethereum's monthly sales volume for the first time in December. Solana's trading volume in December reached US\$366.5M, compared to Ethereum's US\$353.2M, with much of this hype driven by the Tensorians and Mad Lads NFT collections.

Total NFT Transactions

Transaction count dipped in Q4

Number of NFT Transactions by Month



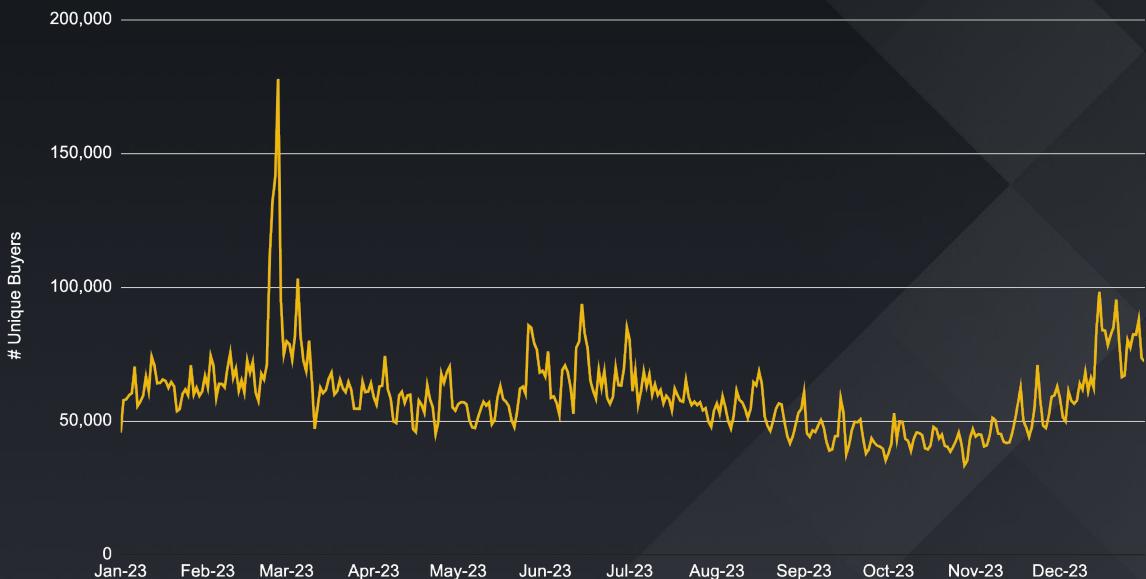
Q4 transactions dipped 12.4% QoQ

- Although Q4 saw a slight dip in quarterly transaction count, December marked the month with the highest number of transactions.
- The resurgence of activity coincided with Blur's phased implementation of its airdrop scheme, which stimulated a surge in transactions among airdrop farmers. The Tensor marketplace on Solana also exhibited a spike in activity as floor prices rose and collections such as Froganas and Solmap contributed significantly to Solana's trading volume.

Number of Unique Buyers

Not yet close to the year-high but gaining traction

Number of Daily Unique Buyers

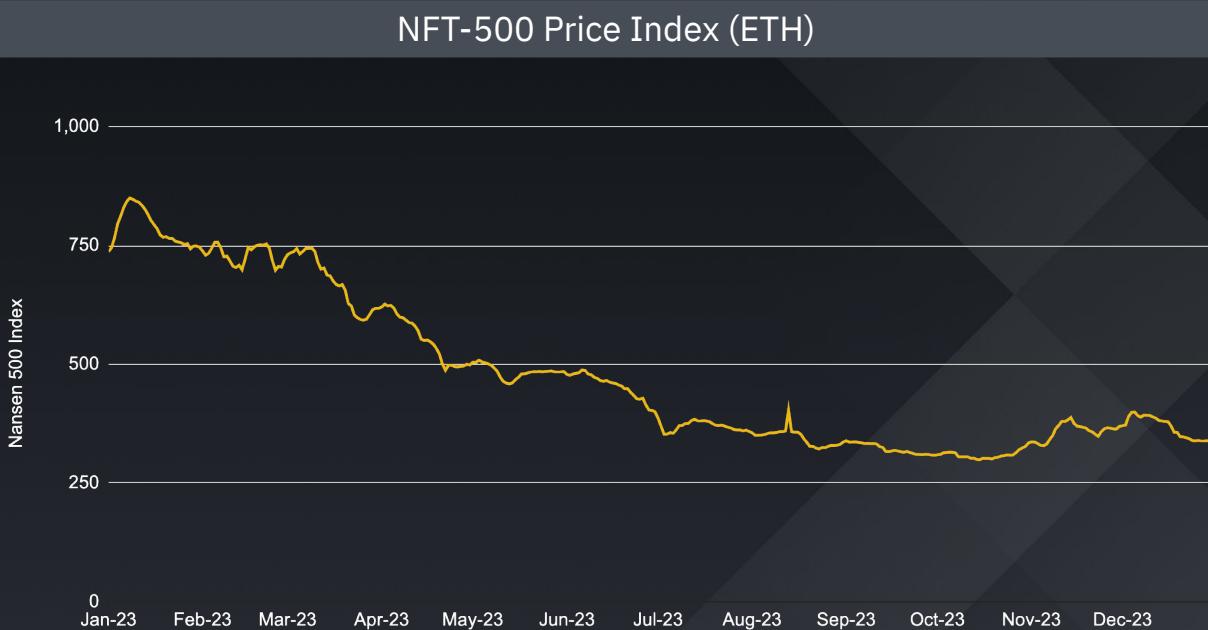


Unique buyers increased in Q4

- The average number of daily unique NFT buyers in Q4 increased by 105.2% QoQ.
- In Q4, the number of monthly unique buyers also exceeded the number of monthly unique sellers, indicating a positive shift from the net negative unique sellers observed in Q3.

NFT-500 Price Index

Performance of NFTs rebounded in Q4



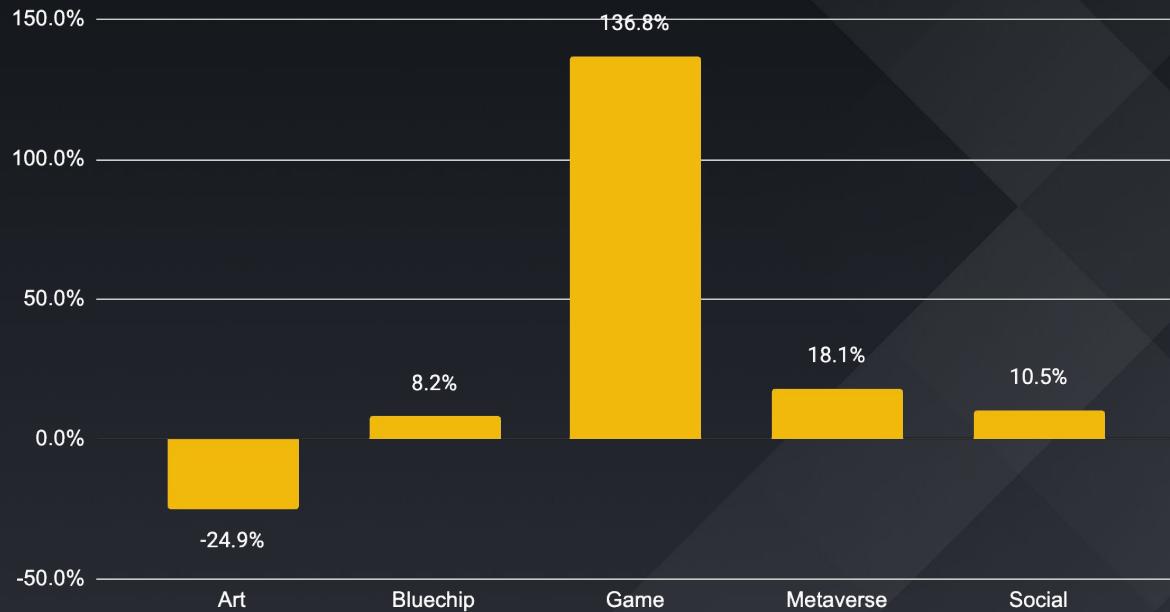
+10.4% QoQ in NFT-500 Index

- The NFT-500 index saw a 10.4% QoQ increase in performance alongside the increase in trading volumes.
- However, the index is still 60% below its 2023 high, underscoring the challenges encountered by the NFT market across the year.

Price Performance by Sector

Gaming-related NFTs **outperformed** in Q4

NFT Index QoQ Performance (Q4 2023)



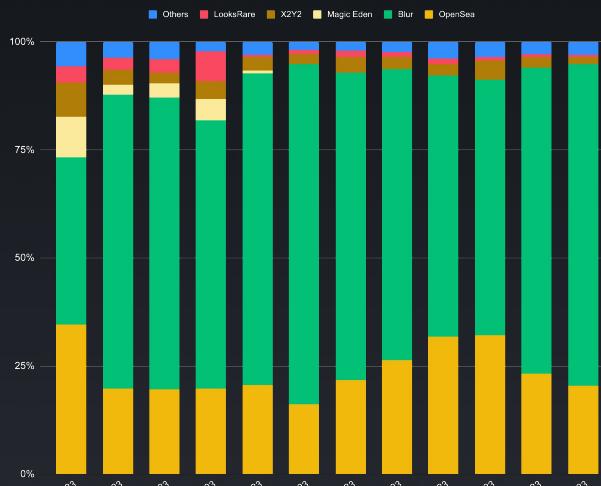
Gaming-related NFTs staged a recovery in Q4 after a rocky Q3

- Gaming NFTs staged a recovery, with a 136.8% growth QoQ, far surpassing other categories.
- Blue Chip PFP collections noted a strong rebound led by Pudgy Penguins, which demonstrated the success of its phygital strategy.
- While Art has shown to be relatively more resilient in past quarters, it has lagged behind in Q4 amidst the strong market recovery.

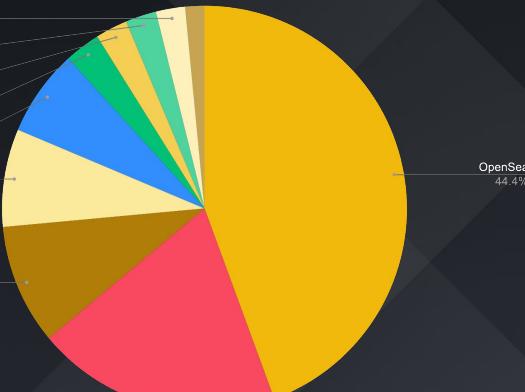
Top NFT Marketplaces by Market Share

Blur regains stronghold in trading volume

By Volume



Active Wallets (Last 3 Months)



Blur dominance is back in the spotlight

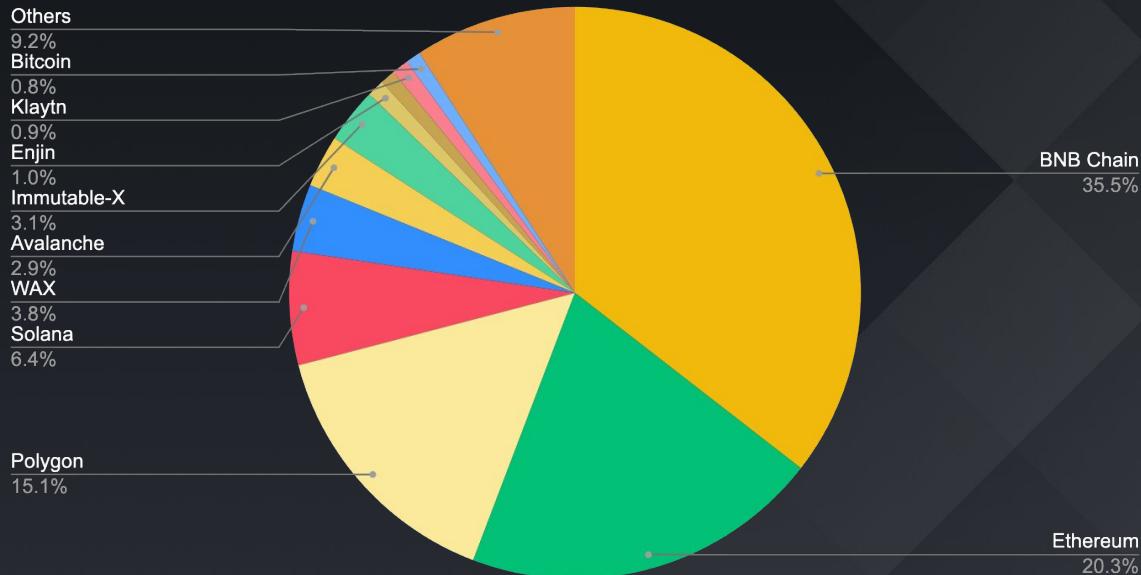
- Following the conclusion of its season 2 airdrop, the Blur NFT marketplace has seen a resurgence in activity. Blur captured a market share of ~75% in December.
- With season 3 upcoming and the mainnet launch of BLAST, this could further consolidate its leadership among other NFT marketplaces.

Gaming

Games by Chain

BNB Chain **leads** with the most number of games

Web3 Games by Chain



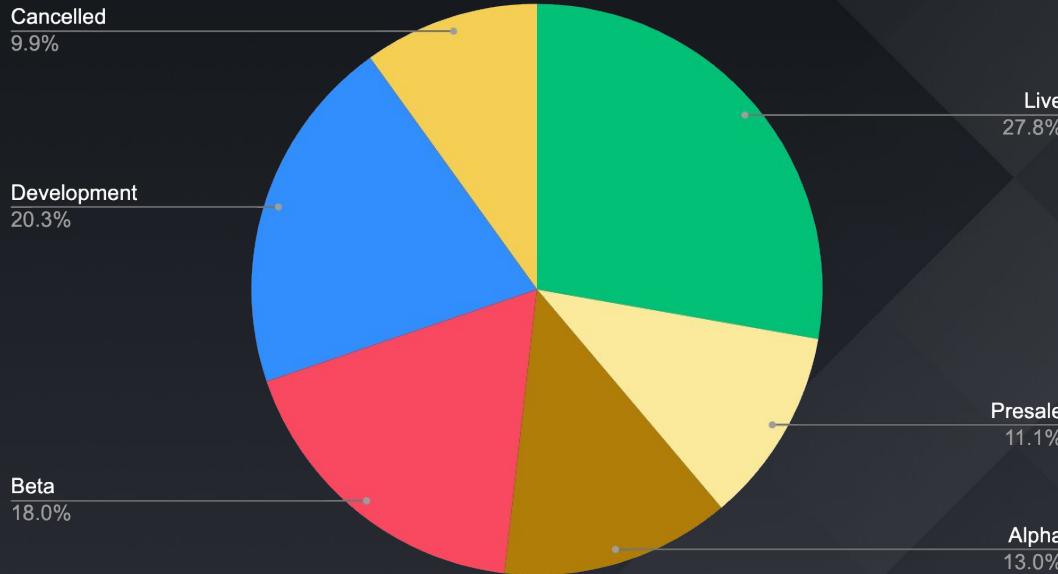
BNB Chain looks set to continue dominating the gaming landscape in Q4

- On a quarterly basis, BNB chain continues to lead, hosting some of the most popular games such as Nine Chronicles, SuperWalk and Yuliverse. It also boasts the largest number of games among all chains, with over 1,000 games on its network.

Games by Status

Gaming well positioned to take off in 2024

Web3 Games by Status

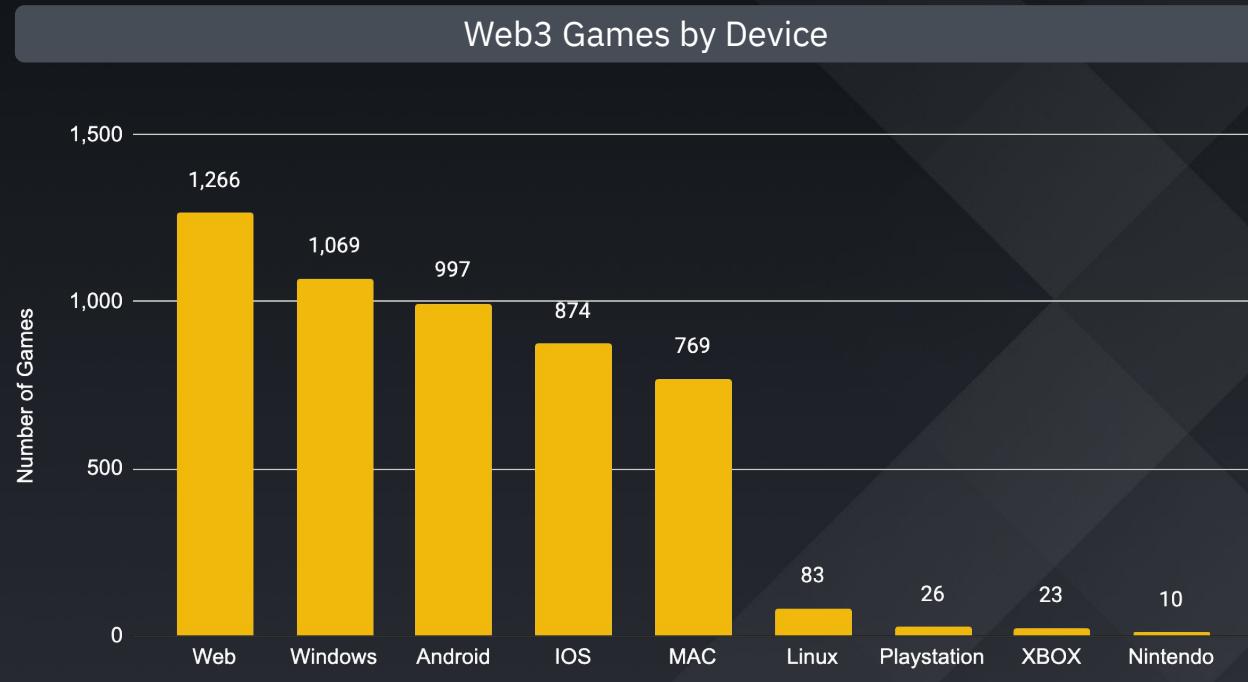


Growing list of AAA games across status

- The percentage of market share occupied by games in development has increased, possibly driven by the maturity of game engines, especially in the development of fully on-chain games.
- Games in alpha stage include: Metalcore, Citizen Conflict etc.
- Games in beta stage include: Big Time, Farcana, Elemental Raiders etc.
- Games in development include: MapleStory Universe, Overworld etc.

Games by Device

Most blockchain games are still on Web and Windows

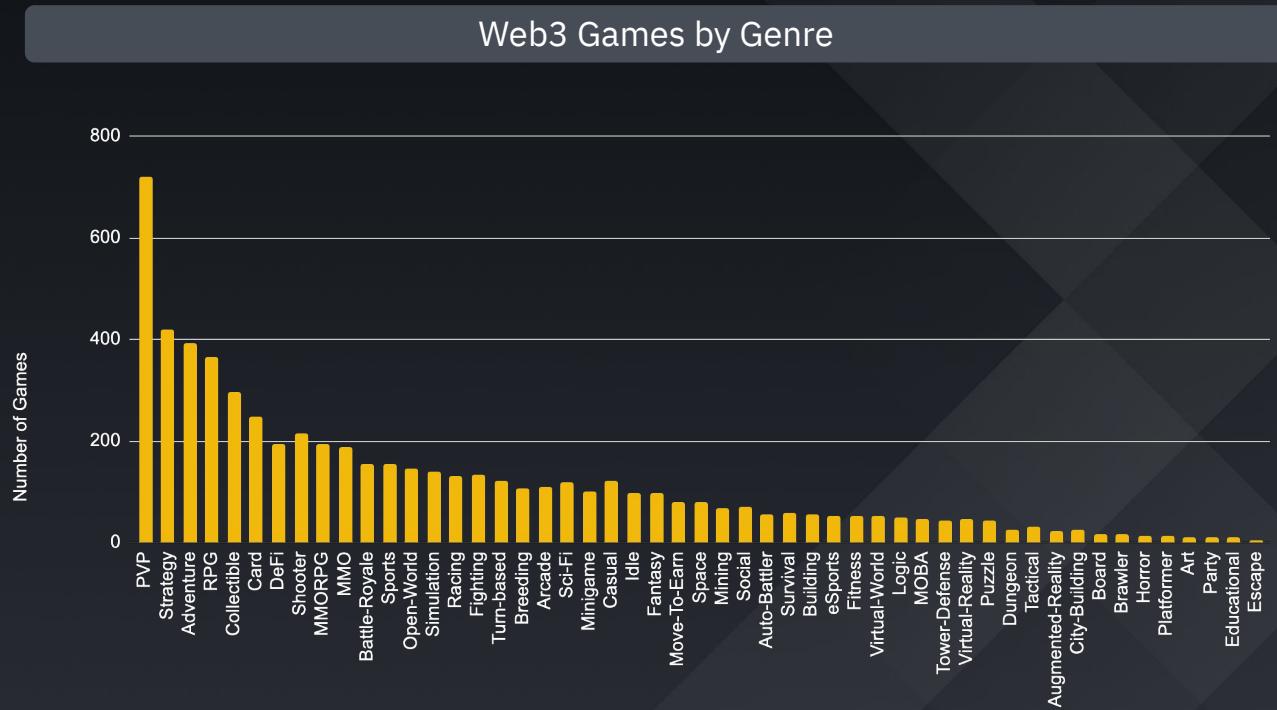


Web-based games lead

- The number of web-based games increased by 2.9% QoQ, while Windows- and Mac-based games saw a combined growth of 9.3% QoQ.
- Mobile-based games recorded an 8.5% QoQ growth. Notable games currently under development and scheduled to launch on mobile include The Treeverse and Cipher Odyssey.
- Console adoption of Web3 gaming continues to lag behind other platforms.

Games by Genre

Player versus Player games lead



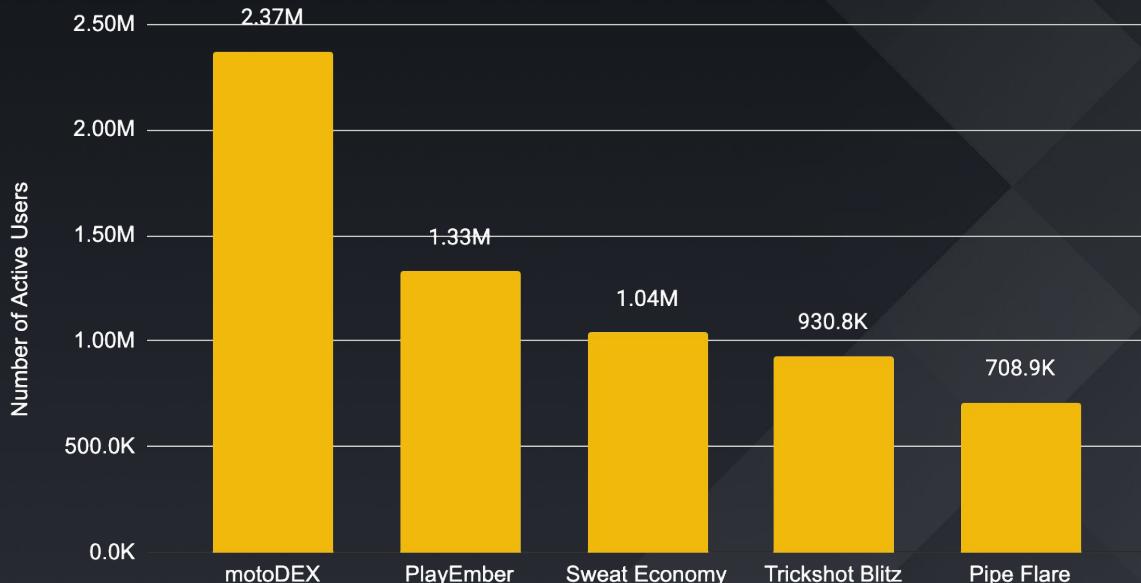
PvP games are leading

- PvP, Strategy, and Adventure are the categories with the highest number of games, possibly indicating that developers see these genres as having the most potential.
- These categories also tend to hold popular AAA games such as Star Atlas: Sage Labs, Nine Chronicles, Big Time, and Pirate Nation, among others.

Ranking of The Most Popular Games

Most popular games by unique active wallets

Games by Unique Active Wallets (Q4 2023)



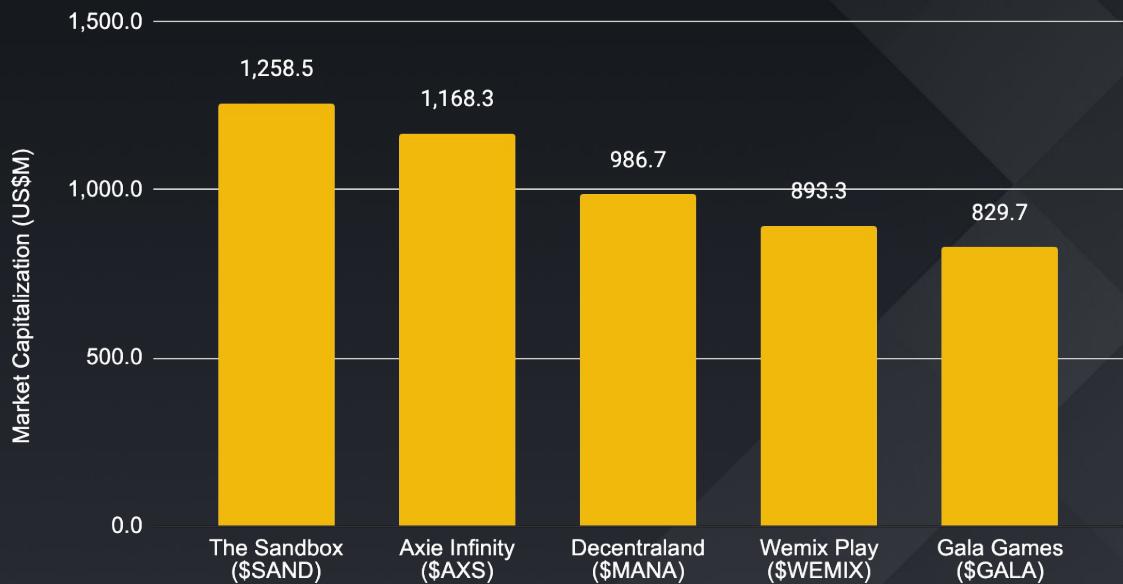
Competitive PvP games take the top position

- motoDEX, a game developed by OpenBiSea game studio, has seen its UAW rise to 2.37M in Q4.
- PlayEmber, a Web3 gaming studio, has also experienced an increase in downloads following the release of popular games like VooDoo, Lion Studios and BoomBit.
- Sweat Economy, a walk-to-earn game on Near, remains popular with over 1M UAW at the end of Q4.

Top 5 Gaming Tokens by Market Cap

\$SAND maintained its leadership position

Gaming Tokens by Market Cap (Last 30 Days)



Broad uplift in metaverse tokens

- Metaverse tokens have seen their market cap rise in tandem with the overall growth in the crypto markets.
- On a QoQ basis, Sandbox nearly doubled its market cap. With Sandbox's latest release of Game Maker 0.9, a toolkit that aims to enhance UI/UX and simplify game development, this has the potential to spur further growth.

About Binance Research

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The image shows a mobile application interface for Binance Research. At the top, there are three yellow dots. The main title is "Binance Research". Below it is a sub-section titled "Binance Research provides institutional-grade analysis, in-depth insights, and unbiased information to all participants in the digital asset industry." To the right of the text are three 3D bar charts and a pie chart, all in yellow and grey. Below this section are four market data cards: "BTC / USDT" (30,745, +2.12%, Volume: 1,107,144,397 USDT), "BNB / USDT" (221, +2.41%, Volume: 100,260,231 USDT), "ETH / USDT" (1,687, +2.54%, Volume: 557,307,226 USDT), and "UNI / USDT" (4.28, +1.52%, Volume: 9,560,450 USDT). At the bottom left is a "charts" button with a bar chart icon. To the right is a "Insights & Analysis" section with a title "Demystifying the Intent-Centric Thesis" and a subtitle "Understanding the Intent-Centric Thesis".

Contributors



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