State of crypto 2024

a16zcrypto

Important Disclosures

Table of contents

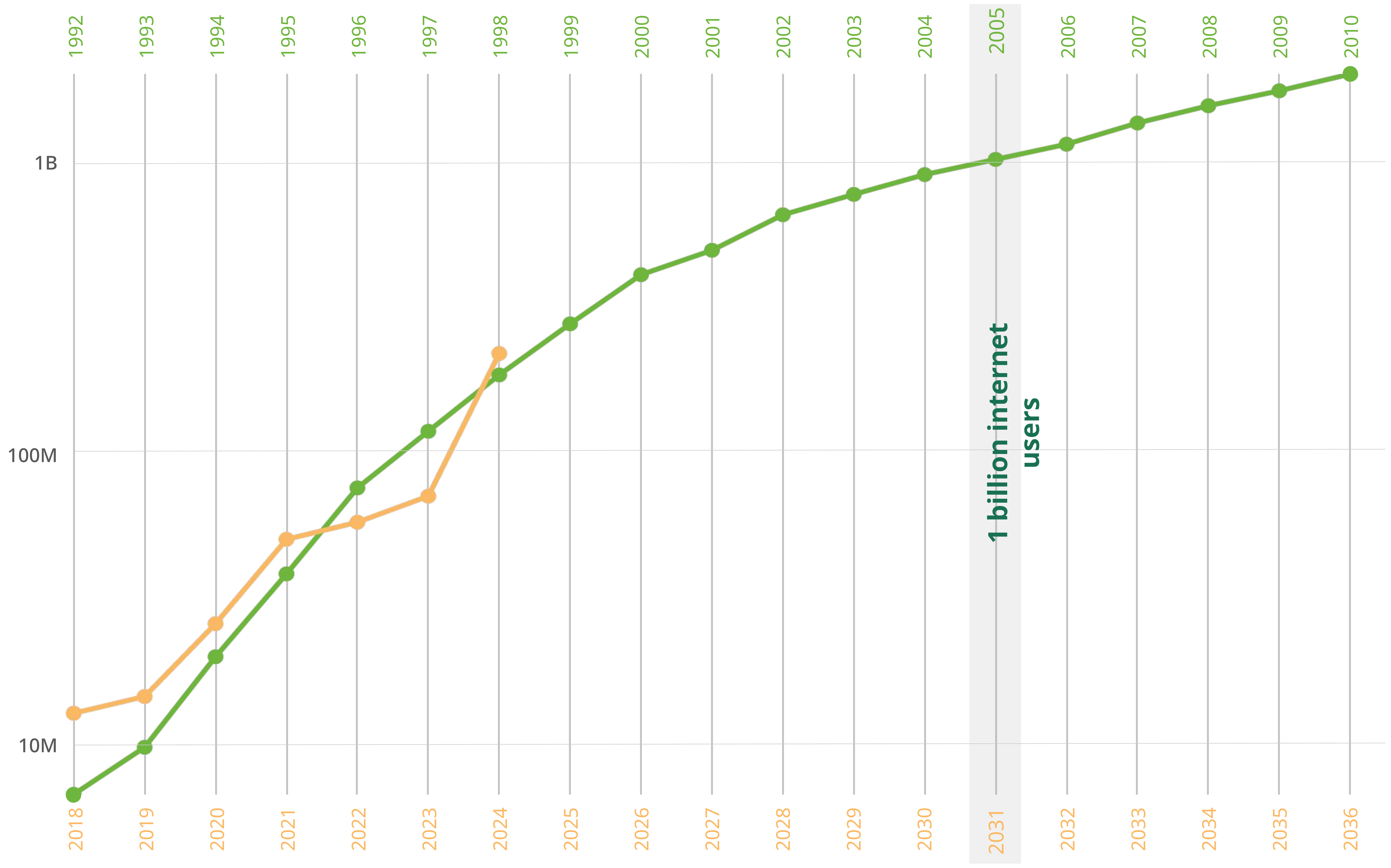
State of Crypto 2024

How big is crypto today?

Monthly active addresses hit an all-time high of 220 million — with growth reminiscent of early internet adoption

Note: One address does not necessarily correspond to one person. For more on how we think about active addresses and users see here.

Internet users[1] vs. monthly active crypto addresses[2] (log scale)



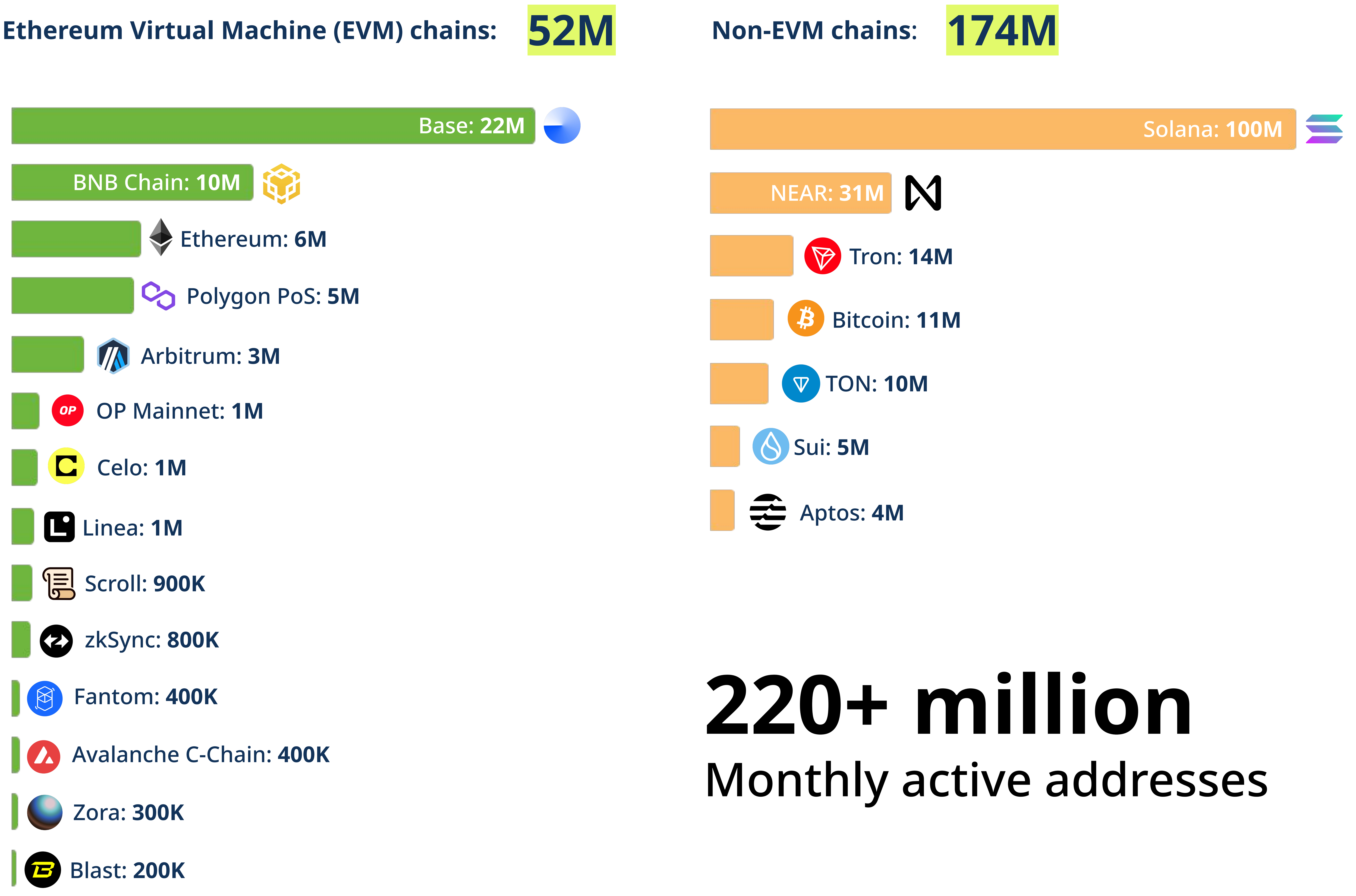
Unique sending addresses as of Dec. of each year; 2024 as of Sept. Blockchains include Aptos, Arbitrum, Avalanche C-Chain, Base, Bitcoin, Blast, BNB Chain, Celo, Ethereum, Fantom, Linea, Near, OP Mainnet, Polygon PoS, Scroll, Solana, Sui, TON, Tron, zkSync, and Zora. EVM addresses active on multiple chains only contribute once to the total.

Sources: 1/ World Bank 2/ Artemis and Dune (@DarenMatsuoka).

Addresses are proliferating across many blockchains, with Base and Solana as the most active

Note: One address does not necessarily correspond to one person. For more on how we think about active addresses and users see here.

Monthly active crypto addresses



220+ million
Monthly active addresses

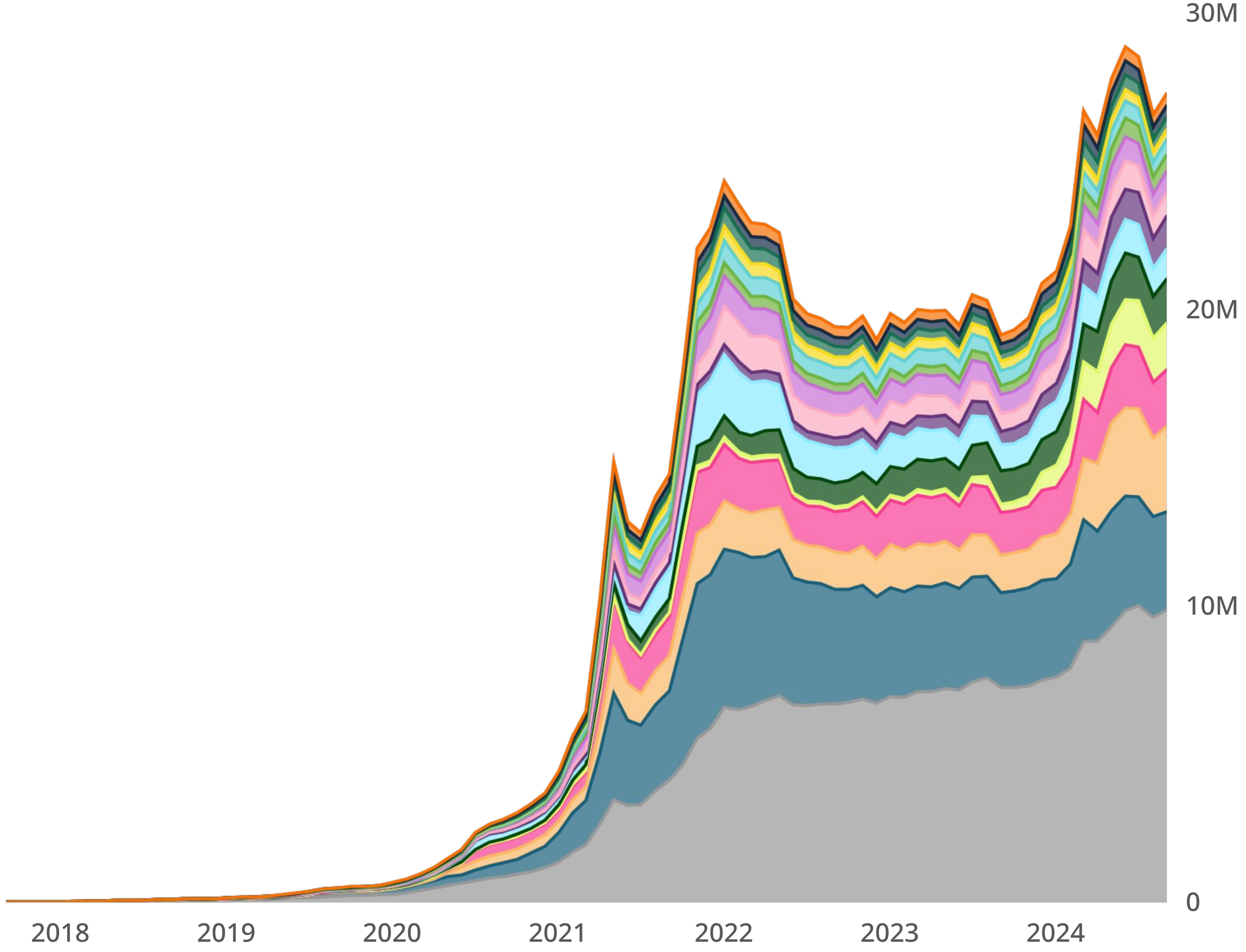
Some of the above are a16z investments. For a full list see a16z.com/investment-list. This content should not be considered investment advice.

EVM addresses active on multiple chains only contribute once to the total.
Sources: Artemis and Dune (@DarenMatsuoka) as of 9/30/2024.

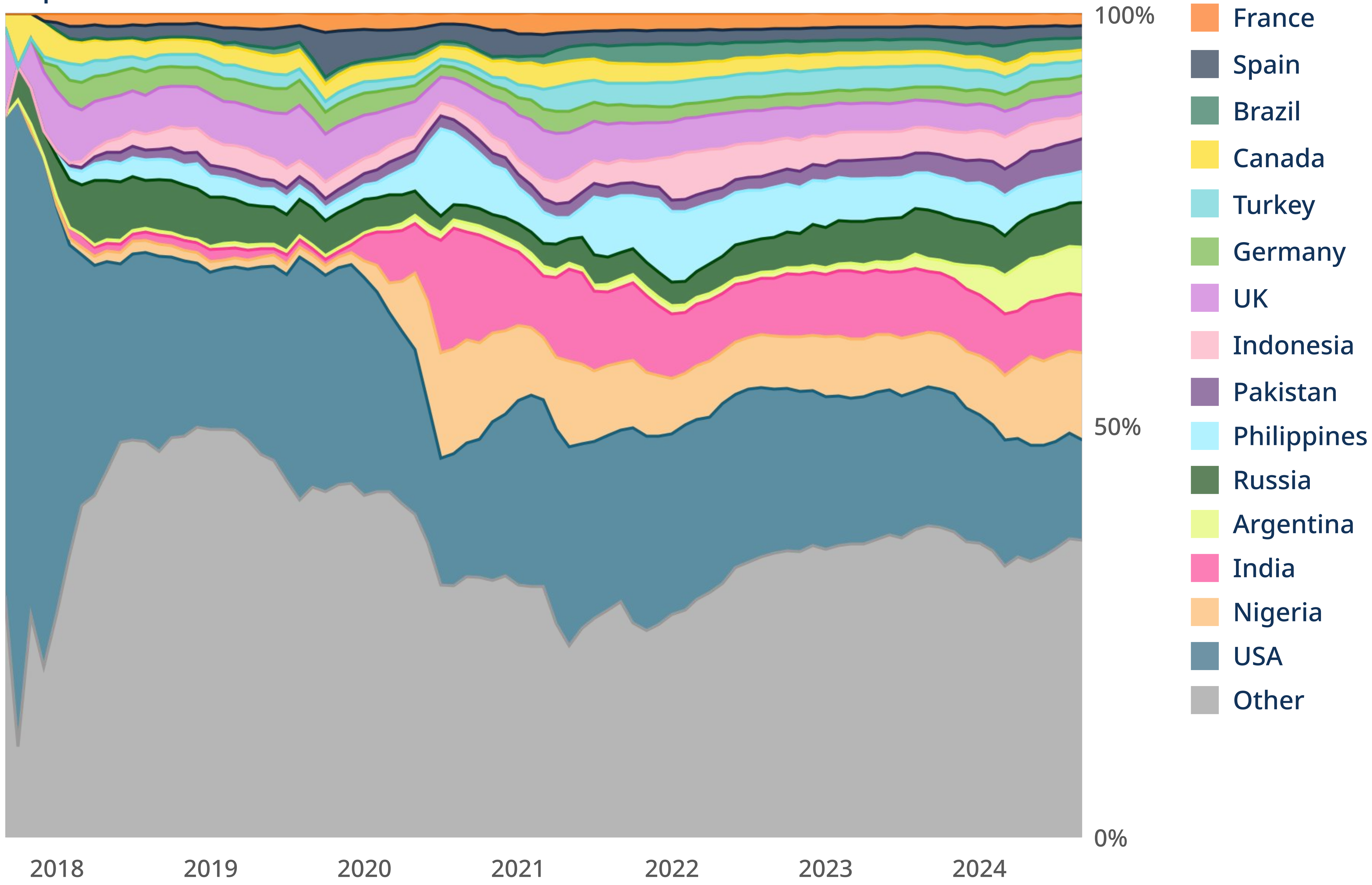
Mobile wallet use hit record highs, driven by growth in countries such as Nigeria, India, and Argentina

Monthly active mobile crypto wallet users by country

Total



As percent of total



Source: Sensor Tower as of 9/30/2024.

We estimate that only 5–10% of crypto owners are active users — there's a big opportunity to re-engage passive holders onchain

30–60M
Estimated monthly active users[4]

617M
Estimated global crypto owners[3]

220M
Monthly active addresses[2]

27M
Monthly mobile wallet users[1]

How do we estimate crypto users?

1/ Apply filtering and de-duplication to **active addresses** to remove bots and transient addresses.

2/ Extrapolate using reported **wallet users** (e.g., Metamask) and mobile wallet market share data.

For more on how we think about active addresses and users see here.

Sources:
1/ Sensor Tower as of Sept 2024
2/ Artemis and Dune as of Sept 2024 (EVM addresses active on multiple chains only contribute once to the total)
3/ Crypto.com as of June 2024 (refers to people who own crypto, but are not necessarily transacting onchain)
4/ a16zcrypto.com/posts/article/estimating-crypto-users/

Crypto has become a key political issue

Democrats and Republicans recognize the opportunity for crypto and are ready to pass **bipartisan** legislation

“We will partner together to invest in America’s competitiveness, to invest in America’s future. We will encourage innovative technologies like AI and digital assets while protecting consumers and investors.”

> Vice President Kamala Harris

"We all believe in the future of crypto....I want to bring members on both sides of the aisle here in the Senate together...so we can pass sensible [crypto] legislation that helps the United States maintain its status as the most innovative country in the world.”

> Sen. Chuck Schumer (D-NY)

“We’ve been working hard to develop a comprehensive cryptocurrency framework that enables entrepreneurs and businesses to innovate responsibly while also protecting consumers and cracking down on bad actors.”

> Sen. Kirsten Gillibrand (D-NY)

“These [crypto builders] are focused on innovating and creating jobs in the U.S. An already difficult task made tougher without clear guardrails or regulation.”

> Rep. Ro Khanna (D-CA)

“This afternoon I’m laying out my plan to ensure that the United States will be the crypto capital of the planet and the bitcoin superpower of the world and we’ll get it done.”

> Republican presidential candidate Donald Trump

“The U.S. has always been a financial leader, but we're on the brink of being left behind in the digital asset race....now Congress needs to pass essential legislation to secure our financial future.”

> Sen. Cynthia Lummis (R-WY)

"Regardless of the outcome, I expect you to see digital asset legislation start to move in both bodies....I think it is ‘when,’ not ‘if,’ regardless of who’s in charge.”

> Majority Whip Tom Emmer (R-MN)

“We'll continue fighting for rules and regulations for digital assets that promote innovation, protect consumers, and keep opportunity here in America, not overseas.”

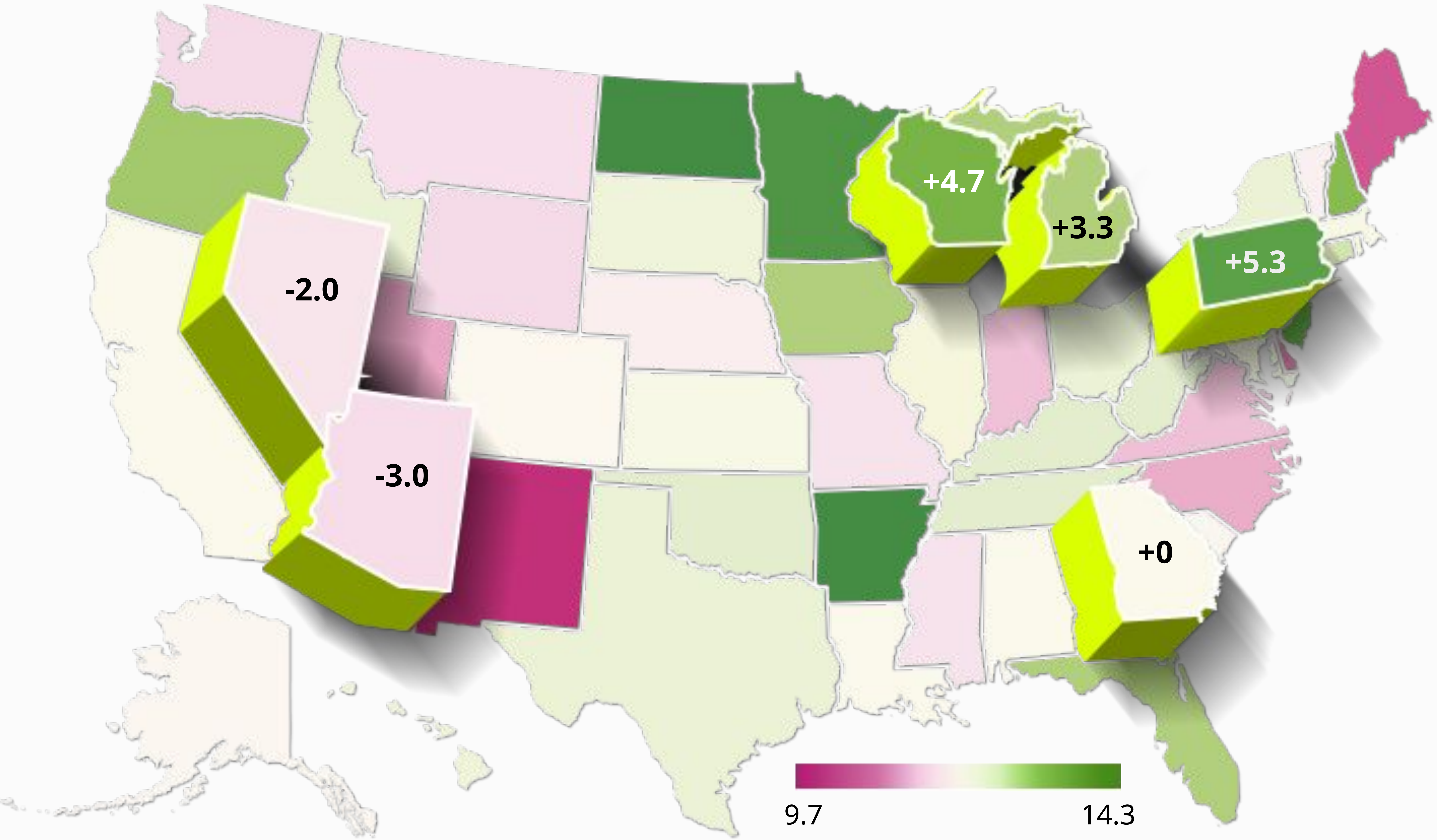
> Sen. Tim Scott (R-S.C.)

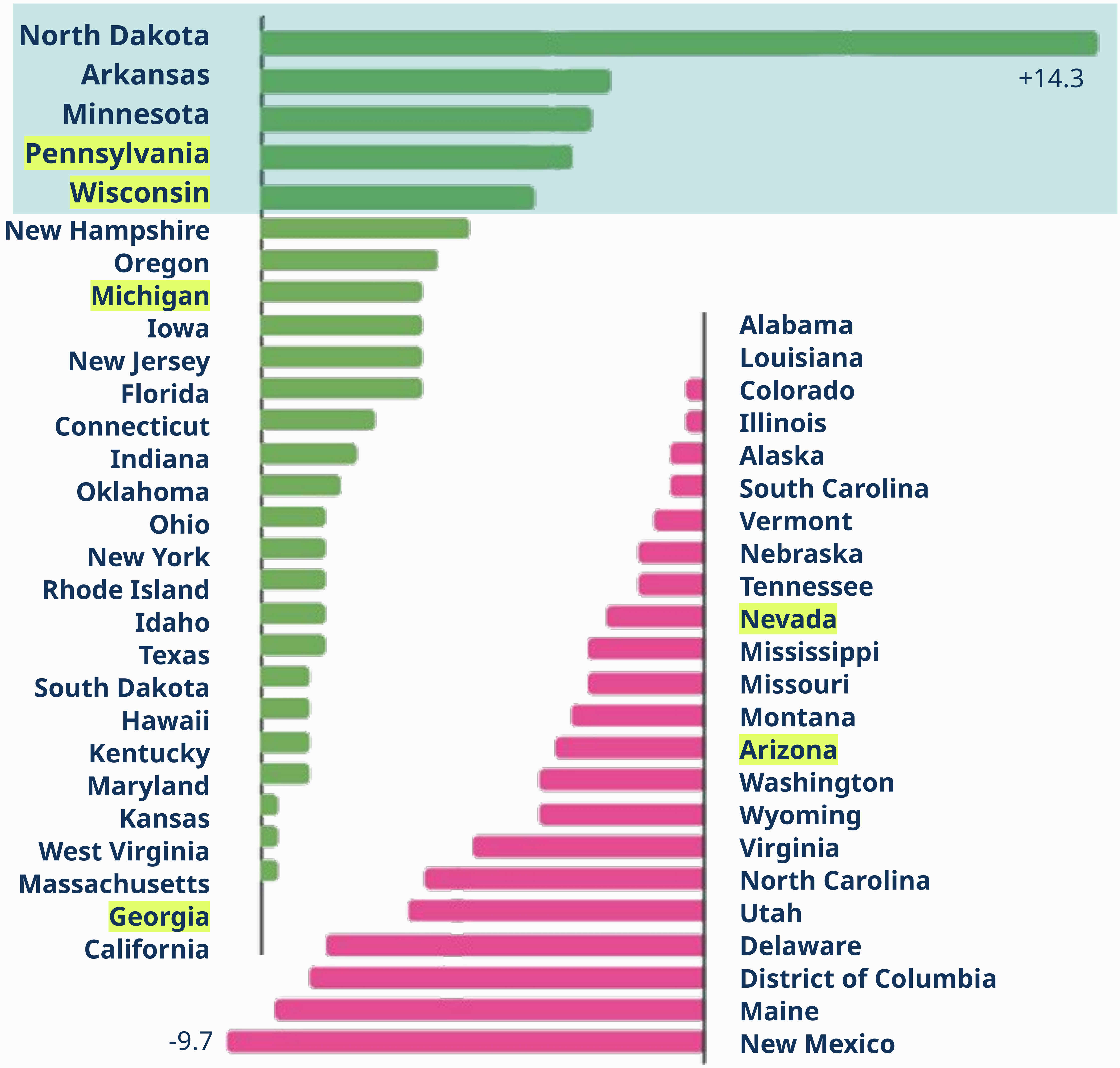
Sources: whitehouse.gov, CNBC, cryptonews.com, X, CNBC, X, Decrypt, X.

Crypto interest is rising in several swing states — Pennsylvania and Wisconsin see Top 5 biggest jumps

Crypto search interest (as a proportion of total searches in each state)

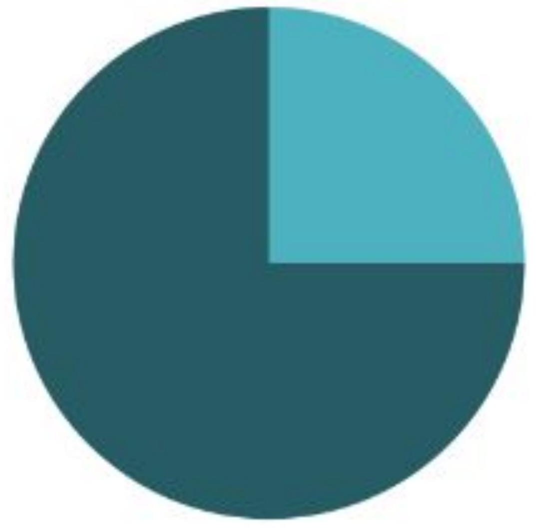
Change in rank from 2020–2024[1]



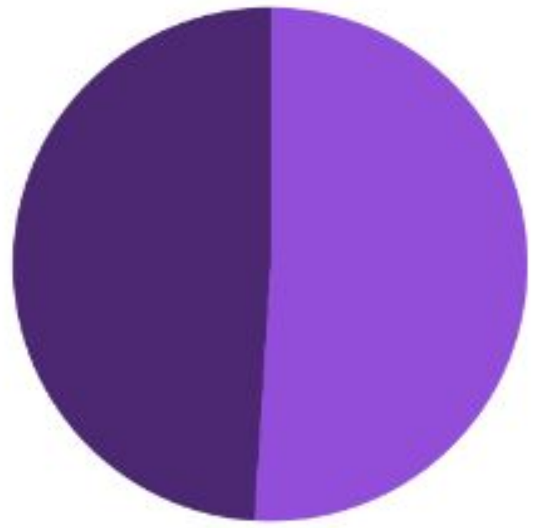


1/ Ranking based on an average across searches for “bitcoin”, “ethereum”, “crypto”. 2024 includes data through 9/30/2024.
Source: Google Trends.

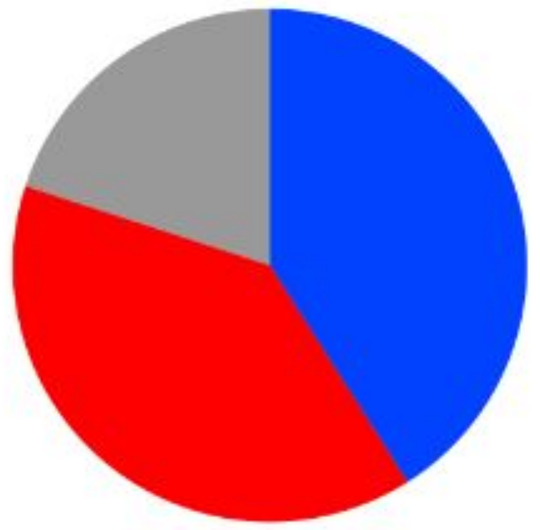
40+ million Americans own crypto[1] — they are young, bipartisan, and supportive of pro-crypto candidates



25% of Americans aged 18–34 own crypto



51% say they're likely to throw their weight behind crypto-friendly candidates

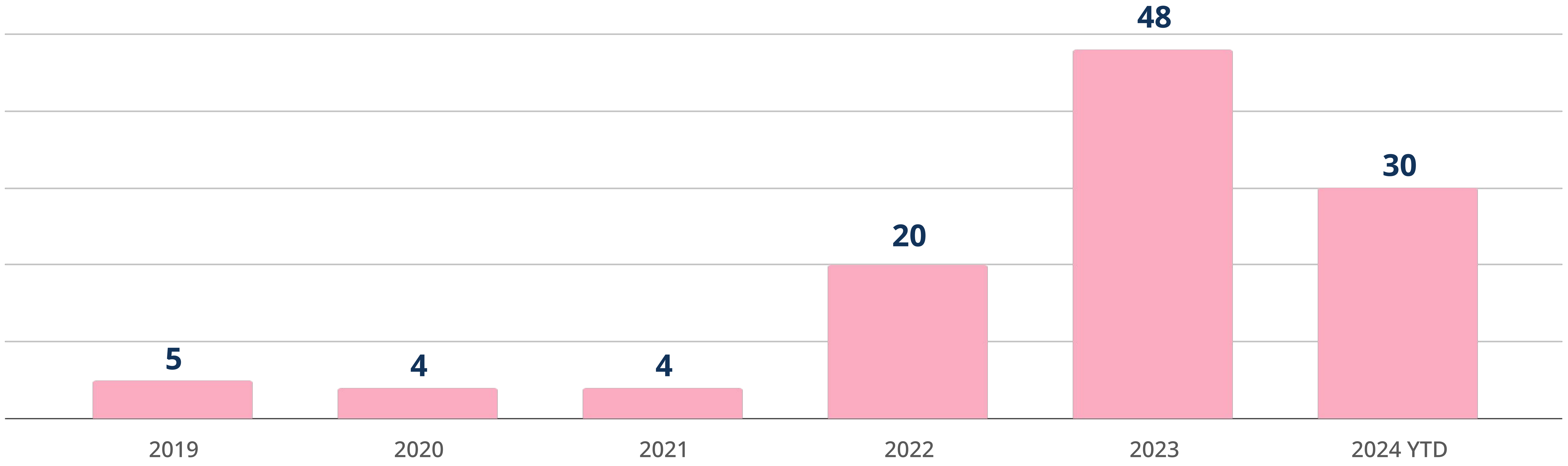


In swing states, 41% identify as Democrats, 39% identify as Republicans, and 20% identify as Independent or Other

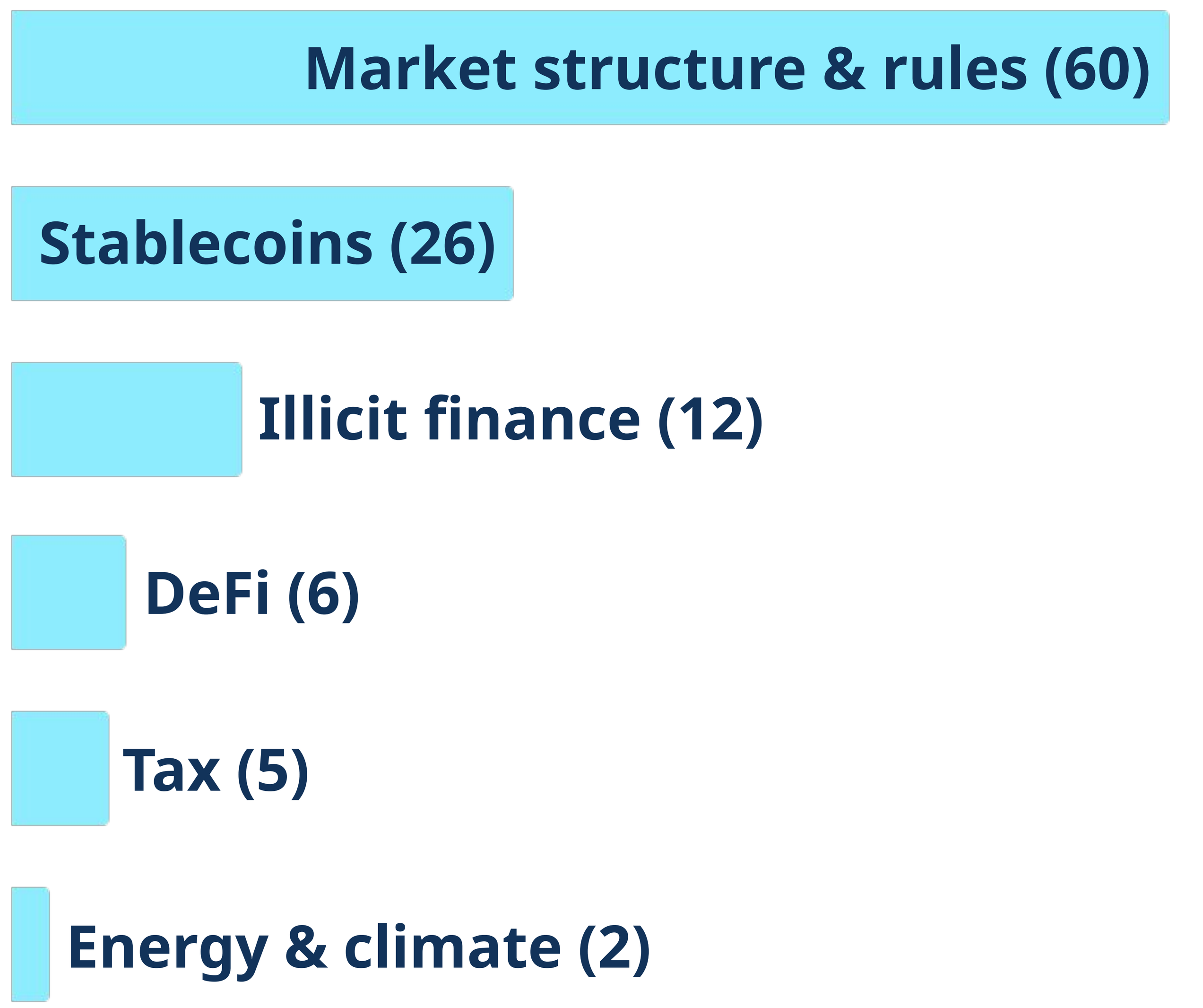
1/ Source: Morning Consult as of April 2024. Reports from Pew Research in 2021, 2022, and 2023 provide a similar estimate, a figure the White House also used in a 2022 fact sheet. However, a 2024 Federal Reserve study based on data from 2023 reports that the number may be slightly lower at 18 million.

All other stats were sourced from the Coinbase State of Crypto Report as of August 2024.

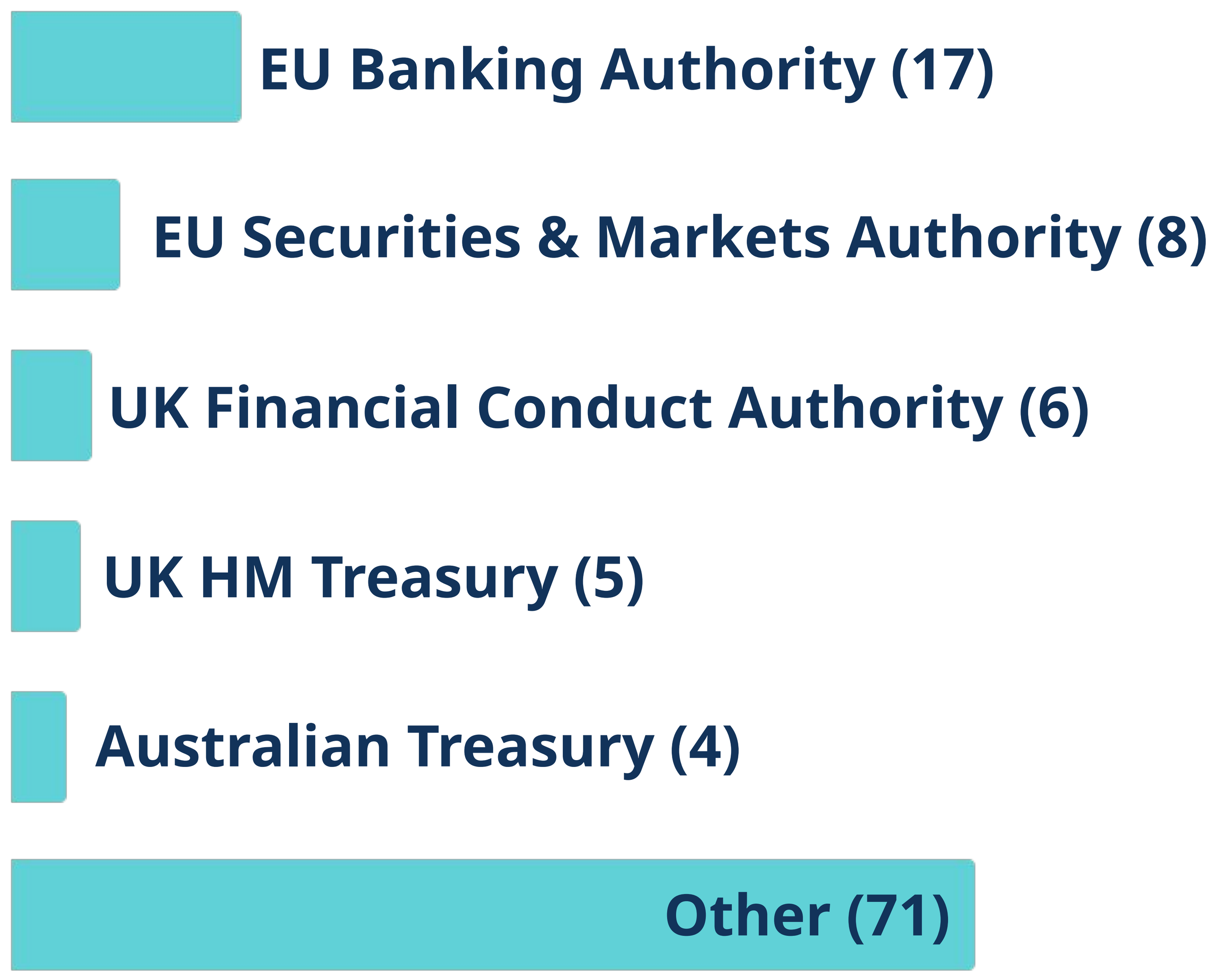
Major crypto policy calls for input



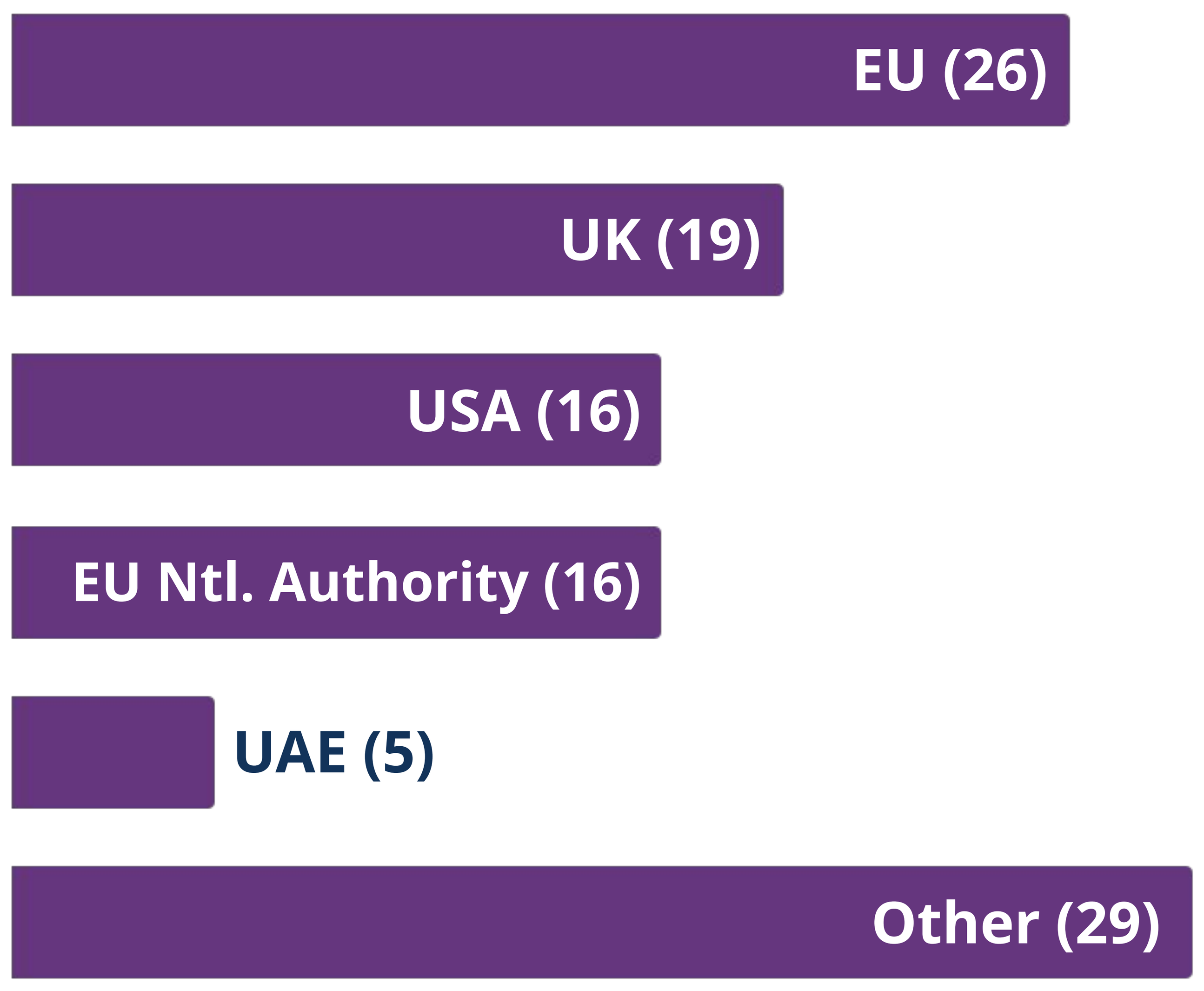
By topic



By authority



By jurisdiction



The EU and UK lead when it comes to public engagement on crypto policy and regulation

Source: a16z crypto analysis as of 9/30/2024.

The crypto industry is on a path toward more regulatory clarity after some major policy wins in 2024

Wyoming Decentralized Unincorporated Nonprofit Association Act (DUNA)

March 2024
Signed into law with an effective date of July 1, 2024

Recognizes DAOs as legal entities, enabling blockchain networks to operate lawfully without compromising their decentralization

U.S. Financial Innovation and Technology for the 21st Century Act (FIT21)

May 2024
Passed the House with bipartisan support, including 71 Democrat votes

Provides regulatory clarity for crypto, protects consumers from bad actors, and promotes American innovation — pending Senate approval

EU Markets in Crypto-Assets Regulation (MiCA)

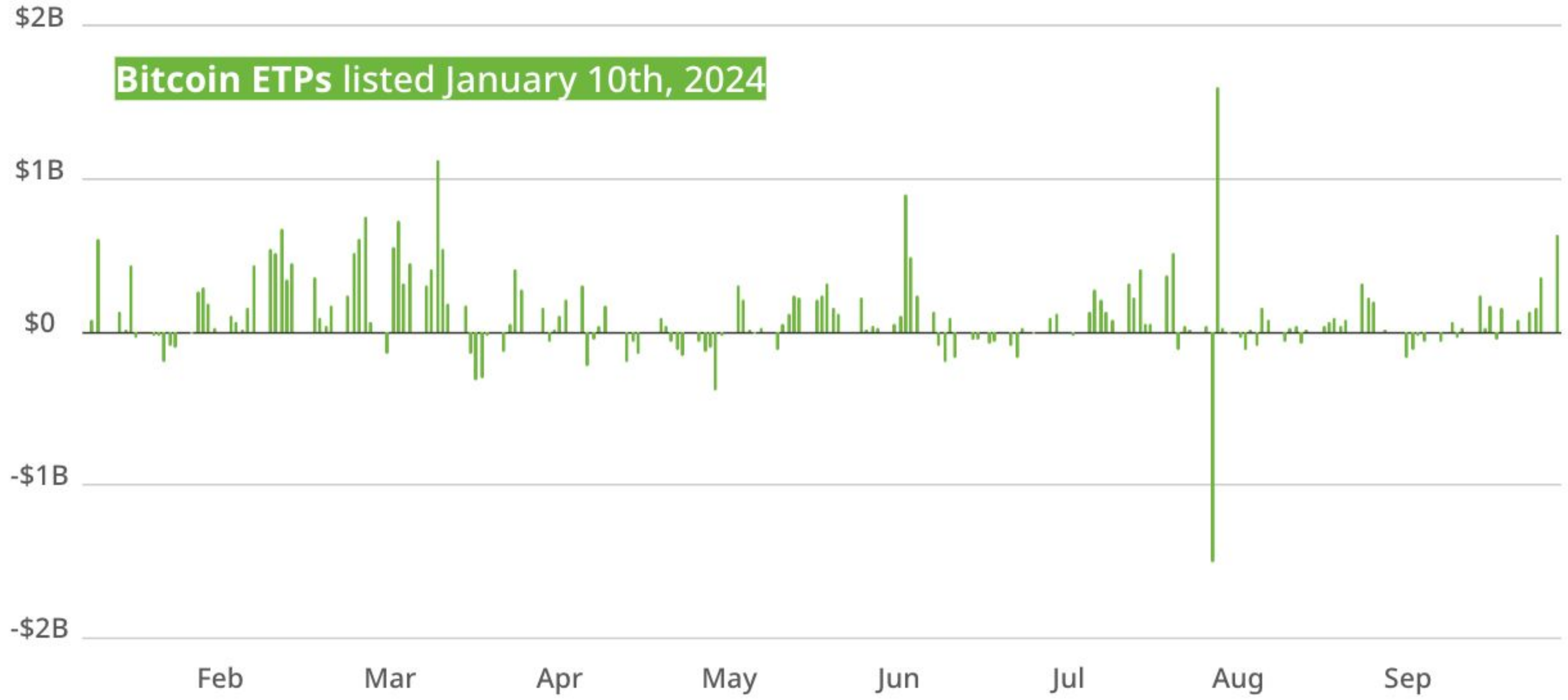
December 2024
Goes fully into effect, after approval by a large majority in 2023

The European Union's first comprehensive regulatory framework involving crypto assets and related service providers

The SEC's Bitcoin and Ethereum ETP approvals have broadened investor access to crypto

Note: Though commonly called ETFs, these are actually registered as ETPs using SEC Form S-1, indicating the underlying portfolios are not comprised of securities.

Bitcoin and Ethereum exchange-traded products (ETPs) daily net flows[1]



$58B

Total onchain holdings

$7B

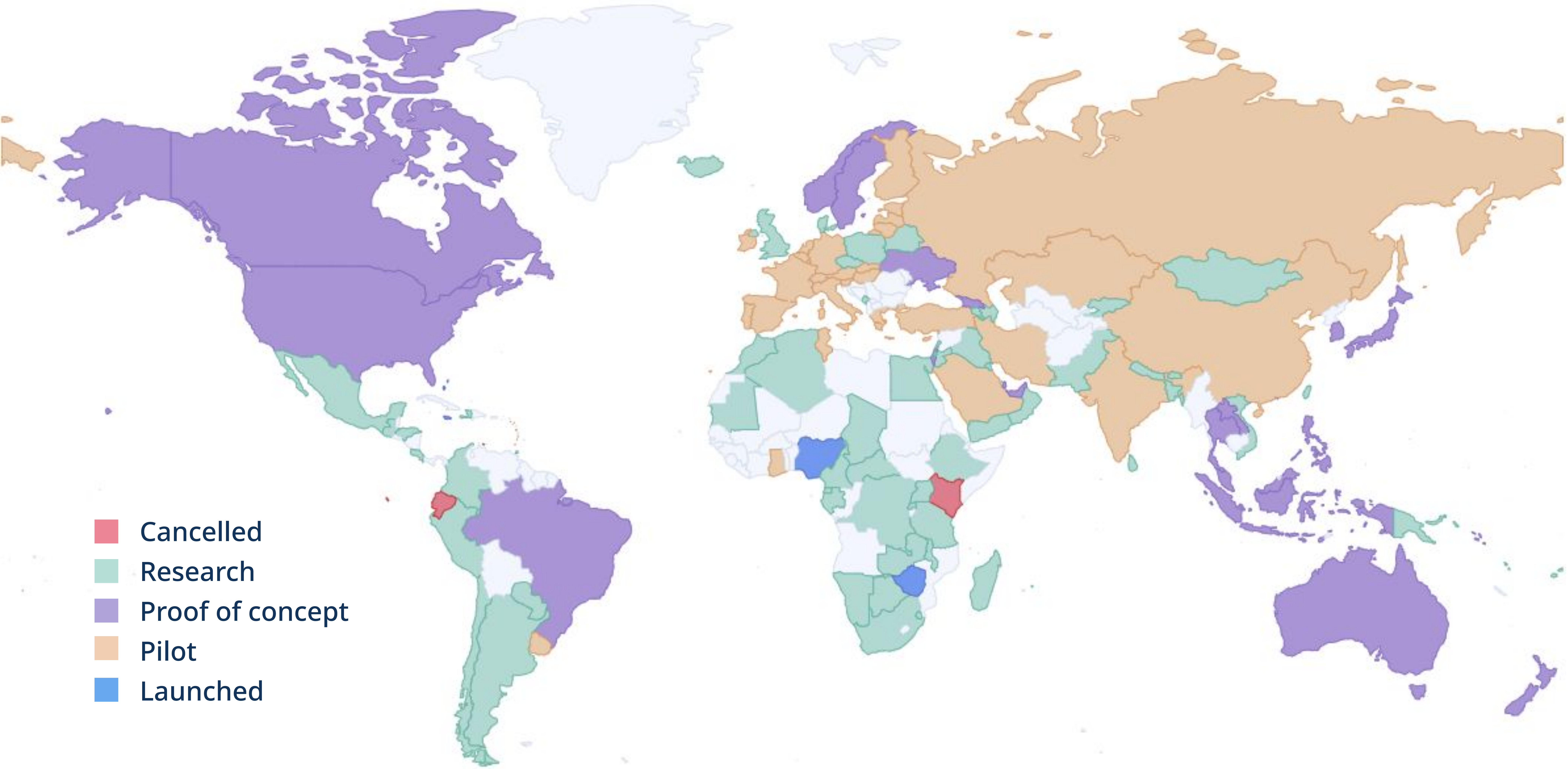
Total onchain holdings

1/ Net flows exclude flows into pre-existing products like the Grayscale Bitcoin and Ethereum Trusts which were eventually converted to ETPs.

Source: Dune (@hildobby) as of 9/30/2024.

The U.S. dollar faces competition from foreign sovereign digital currencies

Status of worldwide central bank digital currencies (CBDCs)[1]

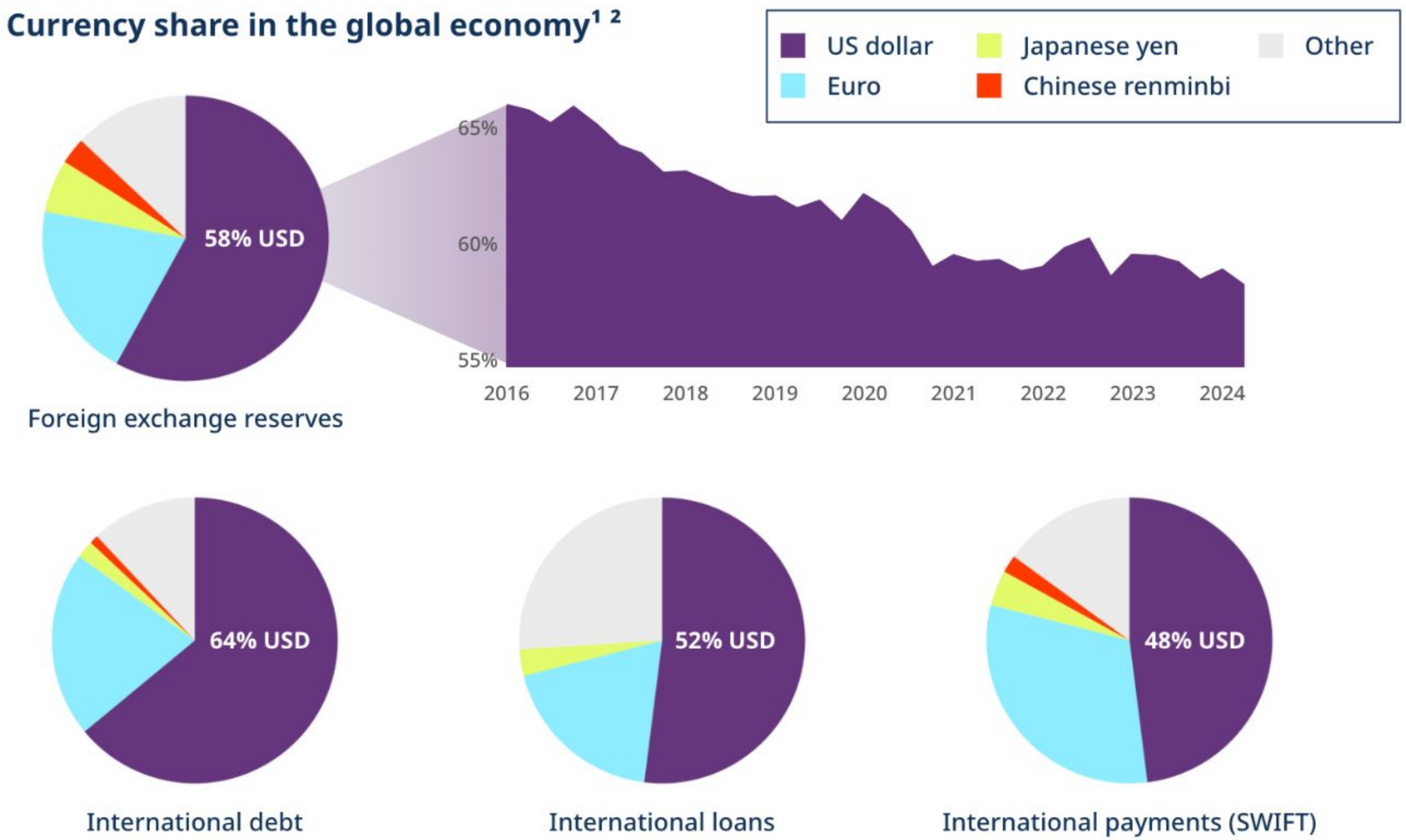


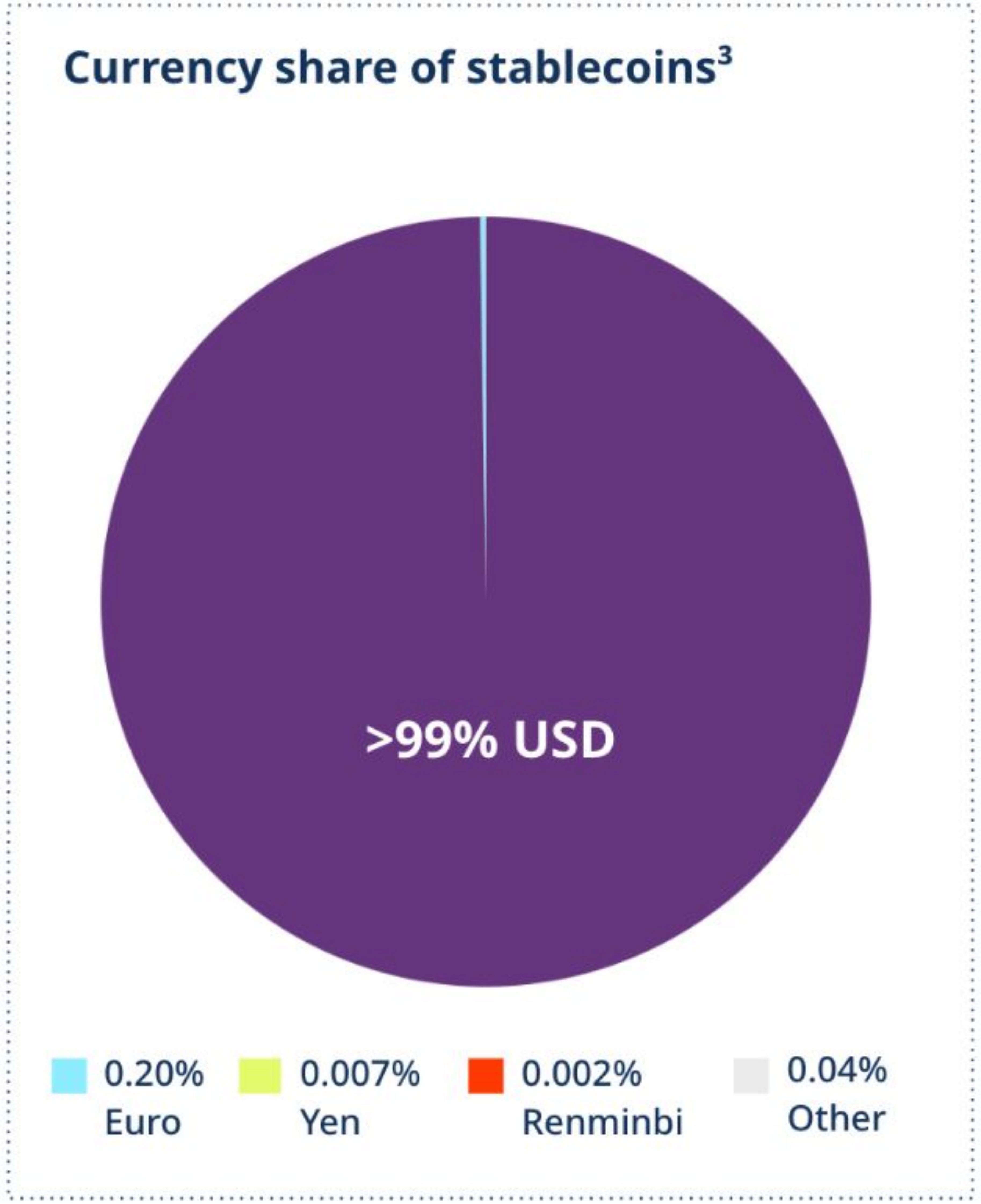
CBDC developments between banks have doubled since Russia's invasion of Ukraine and resulting sanctions.[2]

There are now **13 cross-border projects between banks**, including mBridge, which connects Thailand, China, Hong Kong, UAE, Saudi Arabia, and others.

Sources: 1/ cbdctracker.org as of 9/30/2024 2/ Atlantic Council CBDC Tracker as of 9/30/2024.

Stablecoins can strengthen the U.S. dollar's position as its global reserve currency status slips

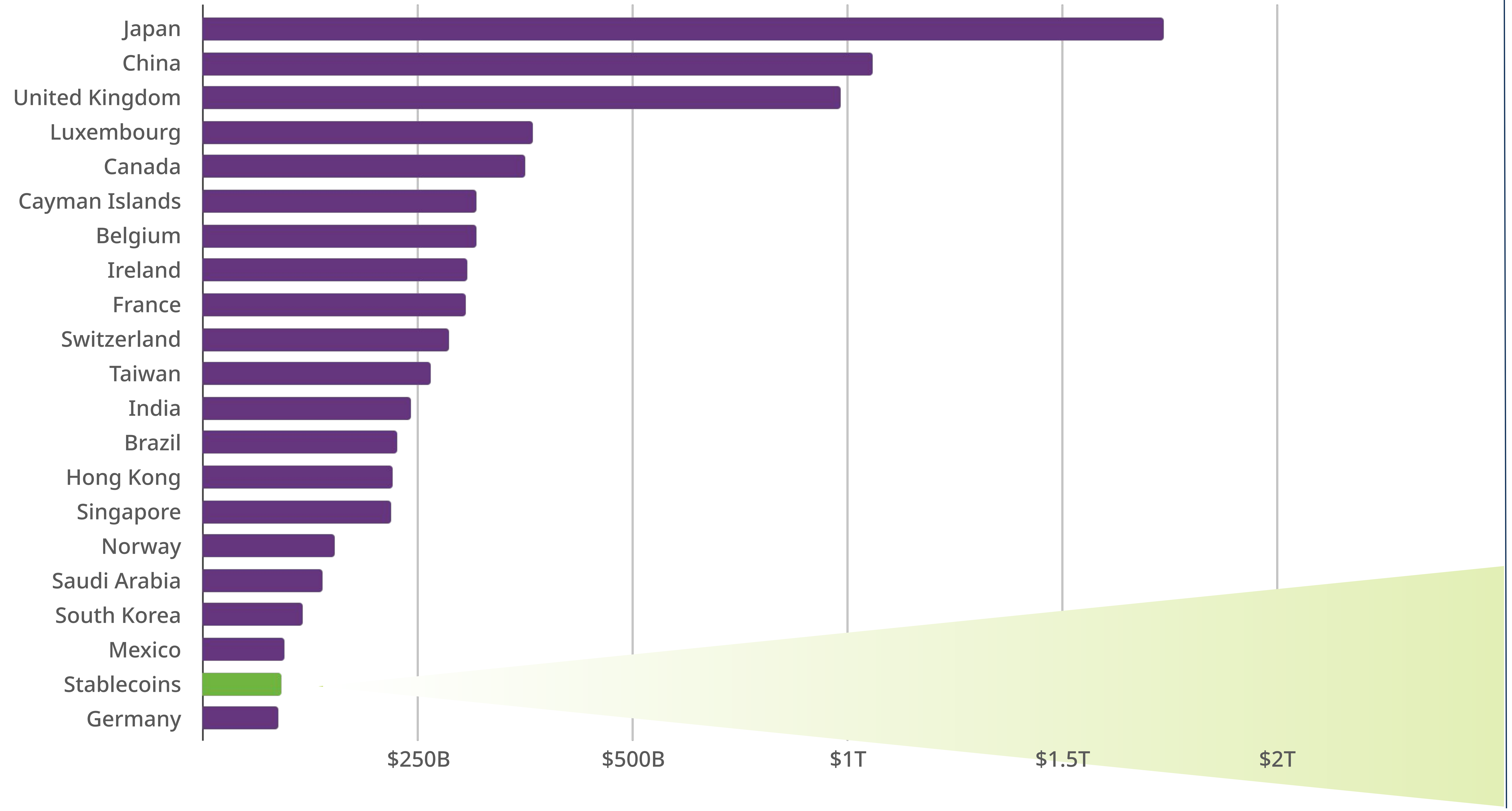




Sources: 1/ Stablecoin report by Castle Island Ventures, Brevan Howard Digital, and Artemis (Sept 2024) 2/ IMF as of 6/30/2024 3/ CoinGecko as of 9/30/2024.

Stablecoins are only a decade old — now they're a Top 20 and rising holder of U.S. debt

Stablecoins compared to major foreign holders of U.S. Treasury securities



Tether

$81 billion held in U.S. Treasuries

Launched in 2014

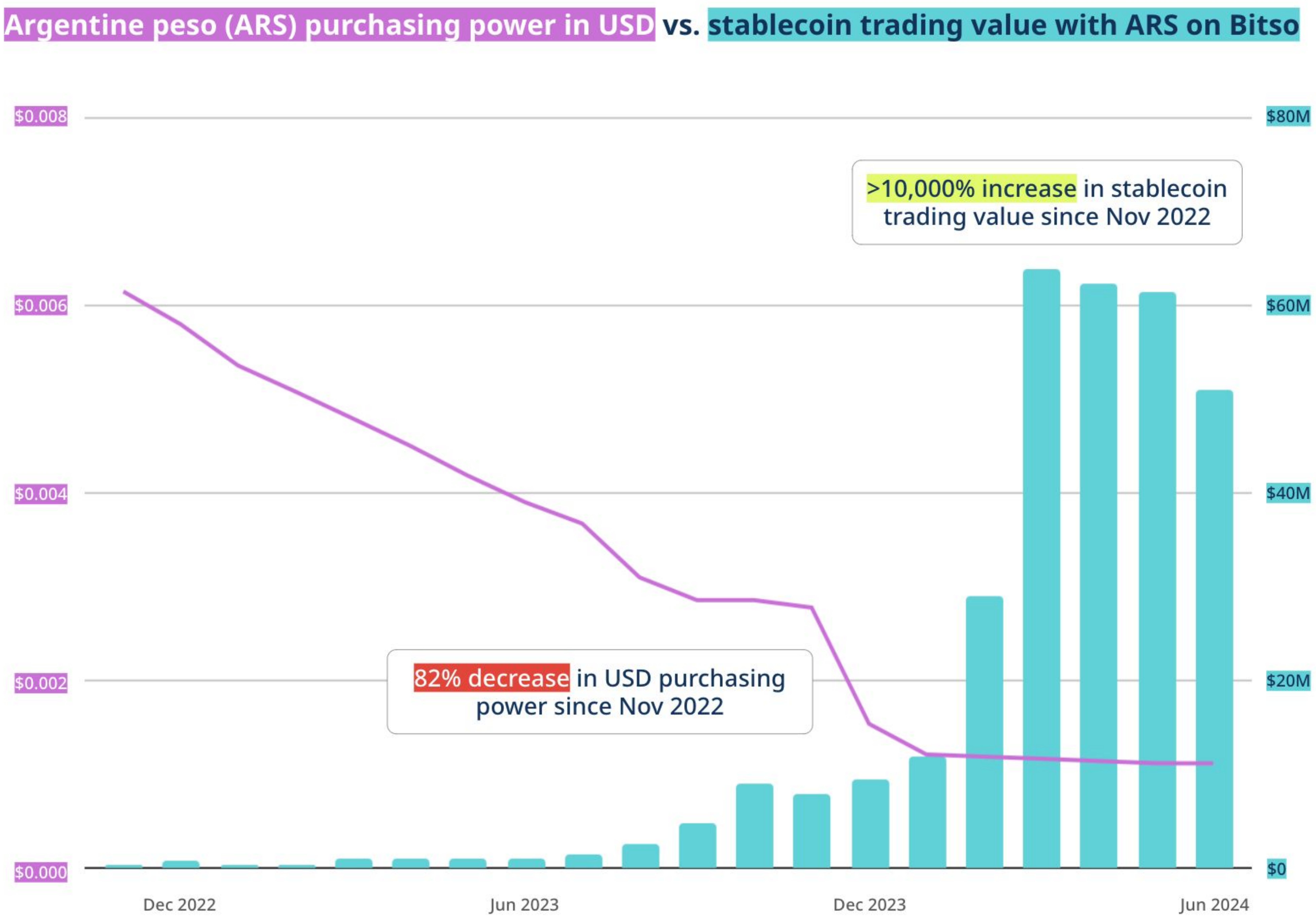
USDC

$11 billion held in U.S. Treasuries

Launched in 2018

Sources: U.S. Department of the Treasury and latest statements from Tether and Circle as of 6/30/2024.

In countries with rampant inflation, people turn to stablecoins to protect their assets



Retail-sized stablecoin value (i.e. transactions under $10,000) received in Argentina is growing at a faster rate than value received in any other crypto asset, including BTC, ETH, and altcoins. Bitso is a leading regional exchange in Latin America.

Source: Chainalysis Geography of Cryptocurrency Report (Oct 2024). Data is through 6/30/2024.

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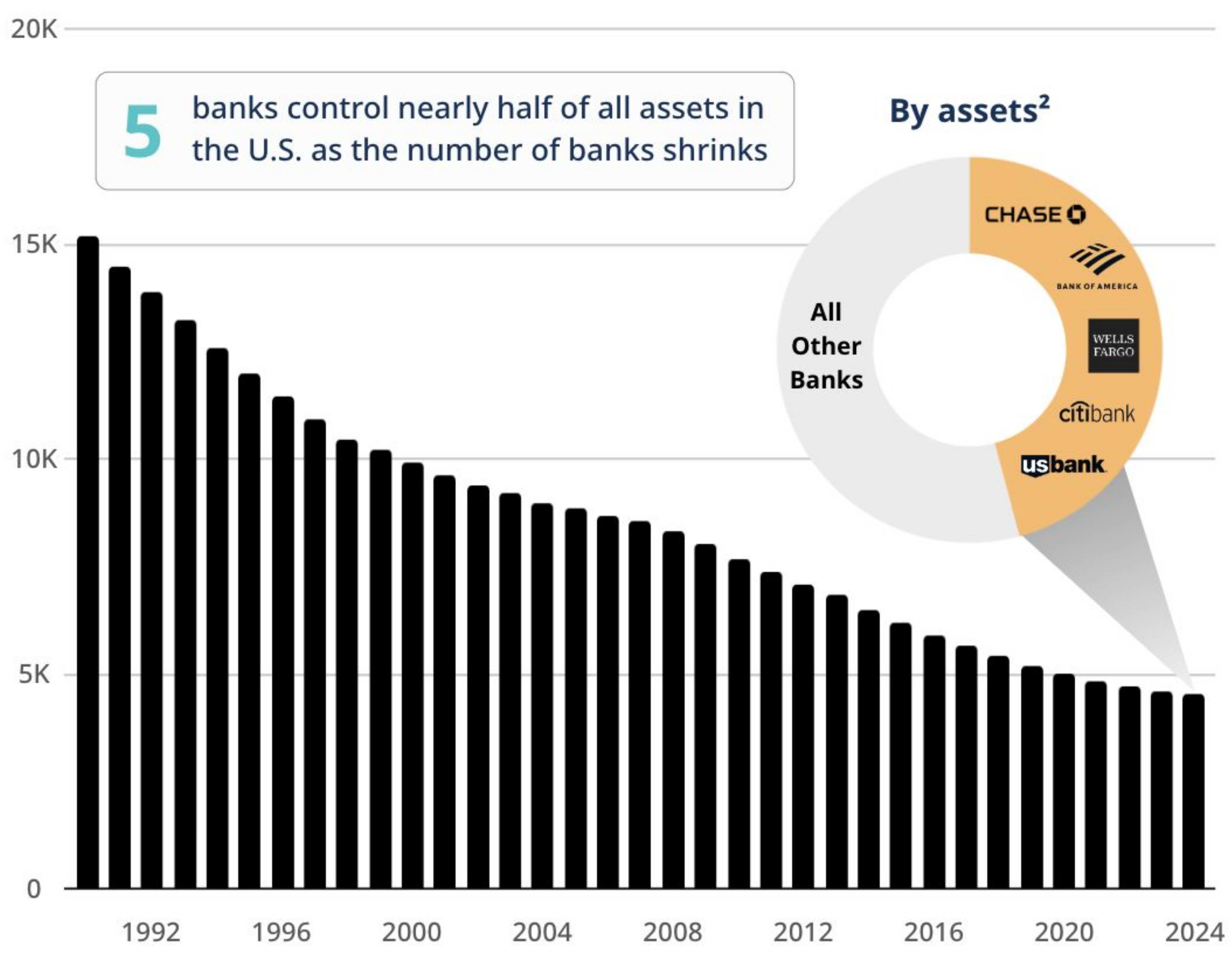
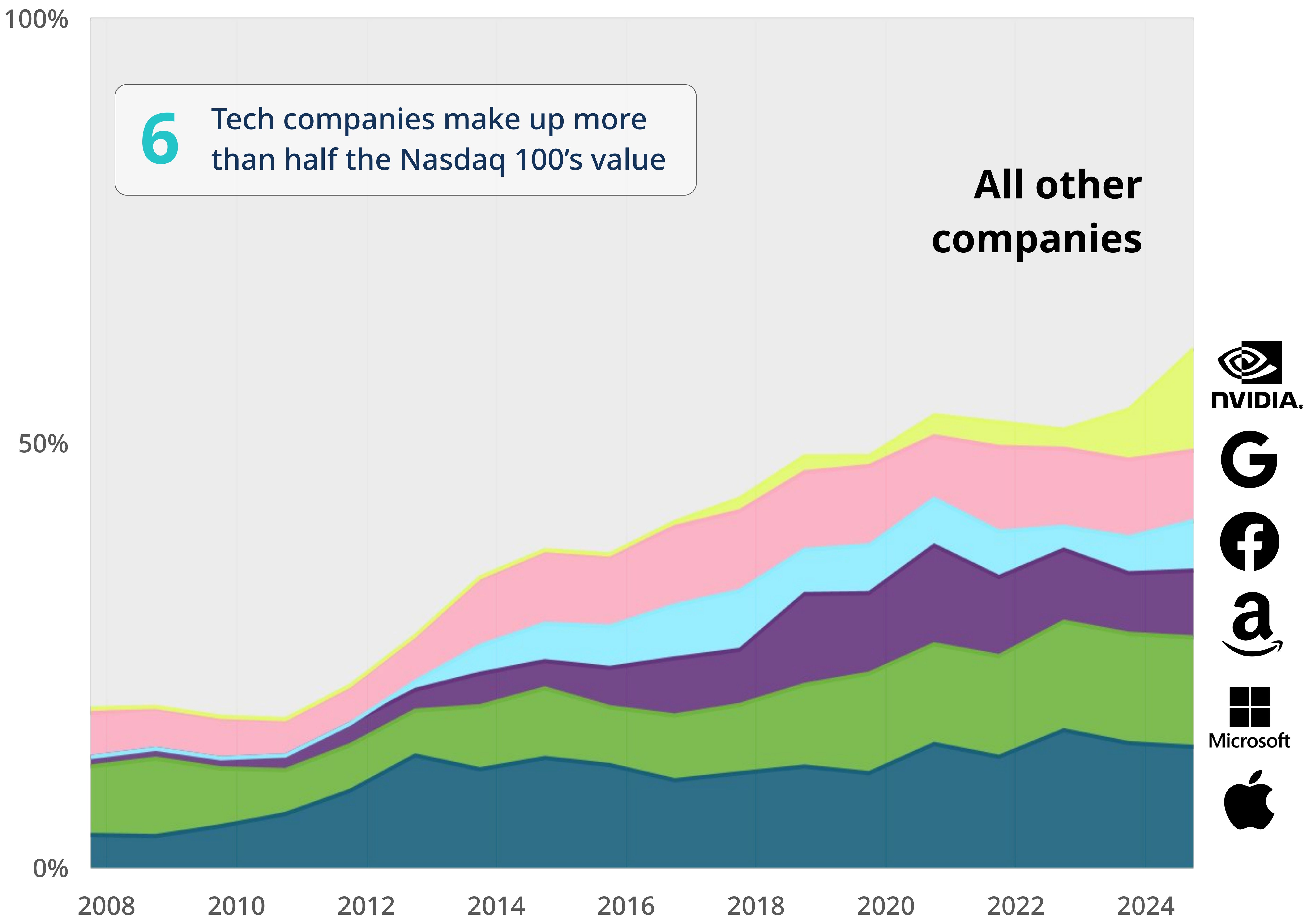
As finance and tech consolidate power in Big Banks and Big Tech, there's a growing need for decentralization

Number of FDIC-insured banks[1]



Market cap of the Nasdaq 100[3]



Some of the above are a16z investments. For a full list see a16z.com/investment-list. This content should not be considered investment advice.

Sources: 1/ FDIC as of 6/30/2024 2/ Federal Reserve as of 6/30/2024 3/ CapIQ and YCharts as of 9/30/2024.

Infrastructure is maturing

Crypto is multichain — with value flowing between increasingly interoperable blockchains

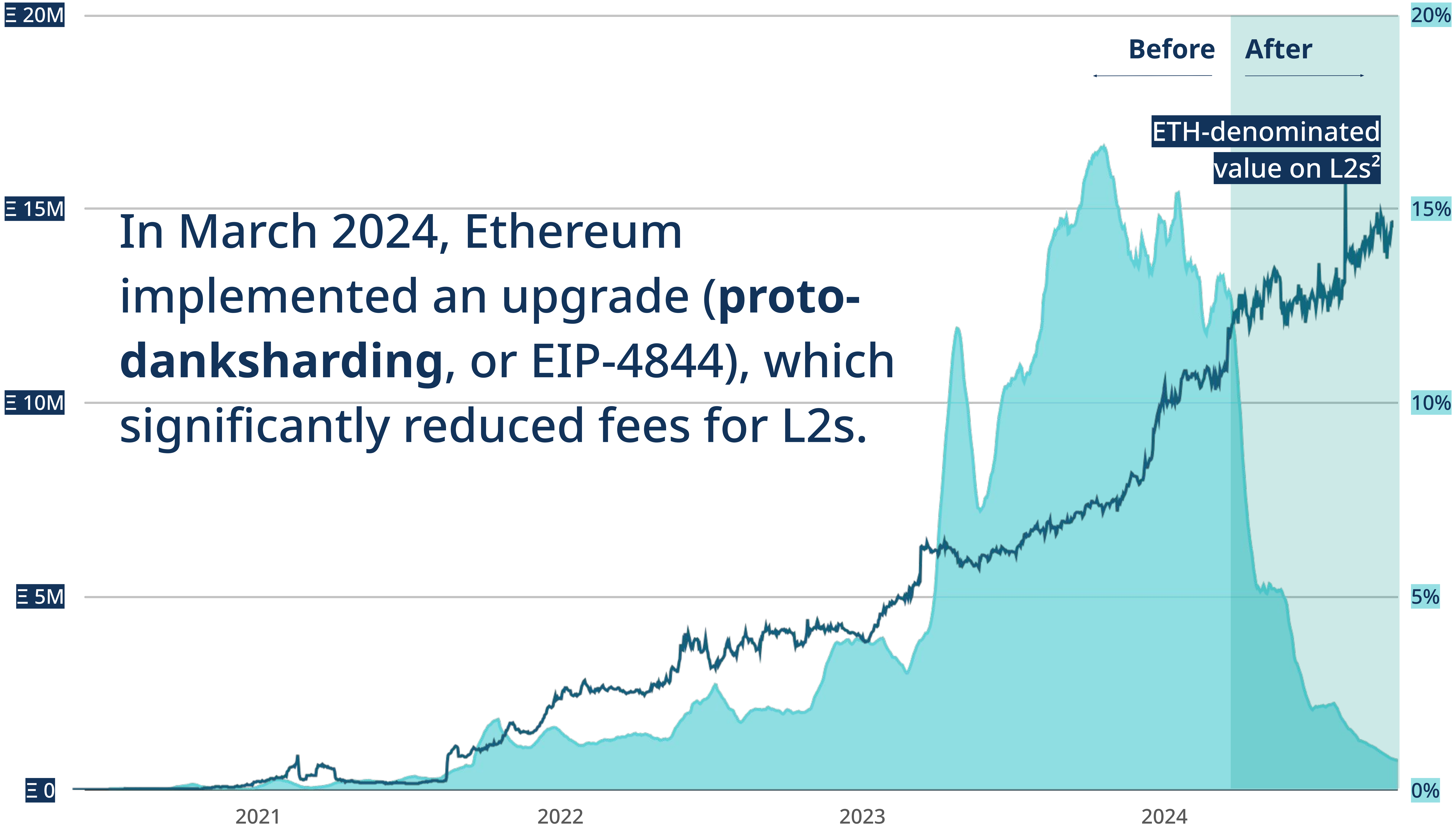
USD flows between various blockchains over last 12 months

Some of the above are a16z investments. For a full list see a16z.com/investment-list. This content should not be considered investment advice.

Source: Artemis as of 9/30/2024.

A significant portion of Ethereum activity is moving to L2s, drastically reducing costs for users

Fees paid by L2s on Ethereum (% of all L1 fees, rolling 30d avg)[1] before and after EIP-4844



EIP-4844 is an Ethereum upgrade designed to reduce fees for layer twos (L2s), networks designed to increase capacity and lower onchain transaction costs. This may exclude some onboarding and exit costs.

Sources: 1/ Dune (@funnyking) as of 9/30/2024 2/ L2Beat as of 9/30/2024.

Cost to send USD internationally

$44 via international wire transfer

$12 via USDC on Ethereum (2021 avg gas price)

$1 via USDC on Ethereum (Sept 2024 avg gas price)

<$0.01 via USDC on Base L2 (Sept 2024 avg gas price)

Ethereum scaling efforts have slashed onchain transaction costs by over 99%

USDC is a popular stablecoin. Base is a layer two (L2) network. Gas price refers to the cost to perform a transaction. The figures above may exclude some onboarding and exit costs.

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Sources: Bankrate, Etherscan, Basescan, and CoinGecko as of 9/30/2024.

While Ethereum is committed to L2 scaling, other high-throughput blockchains are gaining traction

Total value locked in non-EVM blockchains[1]

Some of the above are a16z investments. For a full list see a16z.com/investment-list.
This content should not be considered investment advice.

Non-EVM layer 1 blockchains are Ethereum Virtual Machine (EVM) incompatible.
Sources: 1/ DefiLlama as of 9/30/2024 2/ Artemis as of 9/30/2024.

Blockchains now process 50x as many transactions per second as they did just four years ago

Some of the above are a16z investments. For a full list see a16z.com/investment-list. This content should not be considered investment advice.

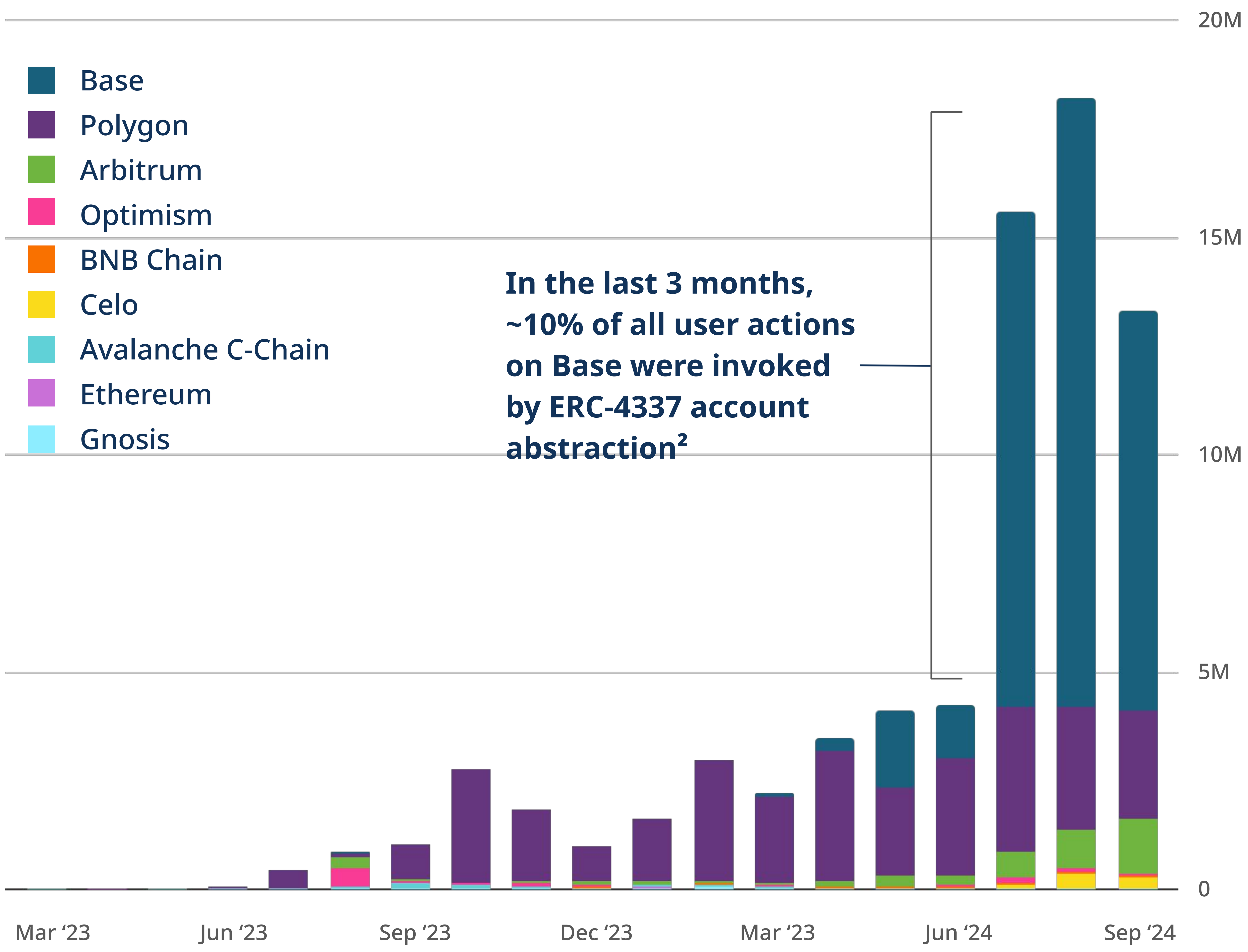
One dot represents one transaction.
Sources: L2Beat and Chainspect as of 9/30/2024.

Account abstraction is key to unlocking better user experiences with crypto

"Smart contract wallets" can provide...

- Social recovery options
- Sponsored transaction fees
- Efficient transaction bundling
- Spending limits
- Multi-factor authentication
- Wallet management system
- Better multichain UX
- Biometric authentication

Monthly user operations related to account abstraction (ERC-4337)[1]

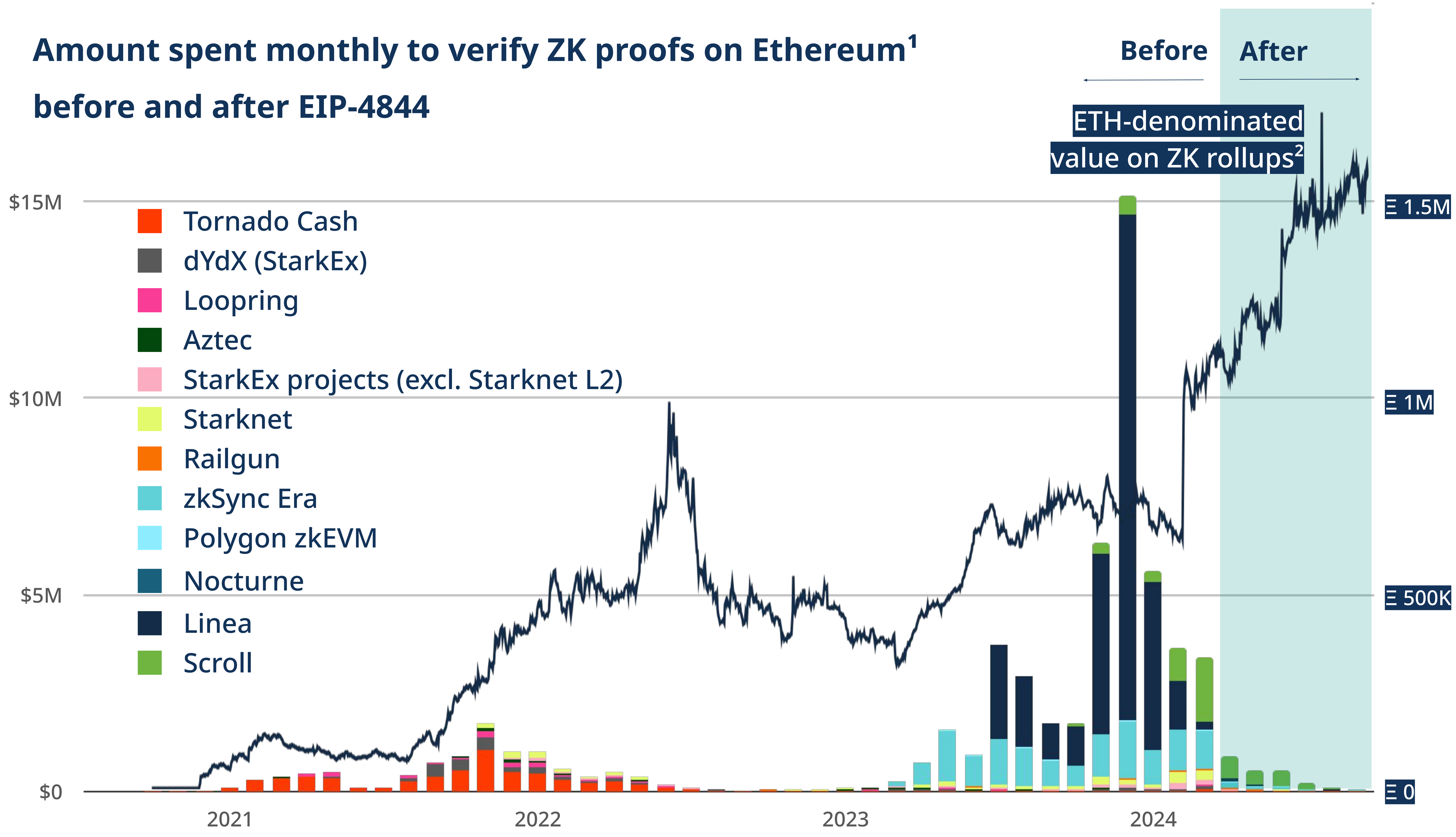


User operations represent actions that get bundled together and executed on behalf of users as part of account abstraction. ERC-4337 refers to the Ethereum standard for account abstraction, which enables new features for smart contracts.

Some of the above are a16z investments. For a full list see a16z.com/investment-list.
This content should not be considered investment advice.

Sources: 1/ Dune (@sixdegree) as of 9/30/2024
2/ Dune (@agaperste) as of 9/30/2024.

Zero knowledge proofs may be the endgame for blockchain privacy, scaling, and interoperability



Today, there are more than **250** crypto projects actively working to advance ZK technology[3]

Zero knowledge is used as a catch-all for cryptography that can succinctly prove that offloaded computations were performed correctly.

Some of the above are a16z investments. For a full list see a16z.com/investment-list. This content should not be considered investment advice.

Sources: 1/ Dune (@nebra) 2/ L2Beat 3/ Electric Capital ZK Market Map, all as of 9/30/2024.

ZK proofs can unlock a new programming paradigm for blockchains

"ZK coprocessors" allow complex computations to be run offchain, giving smart contract developers access to cheap, verifiable compute.

Use cases

- Data-intensive applications
- Machine learning
- Onchain games

- Governance
- Bridging
- Options pricing (Black-Scholes)

- Orderbooks
- State proofs
- Fetch web2 data (zkTLS and zkEmail)

HERODOTUS

AXIOM

LAGRANGE

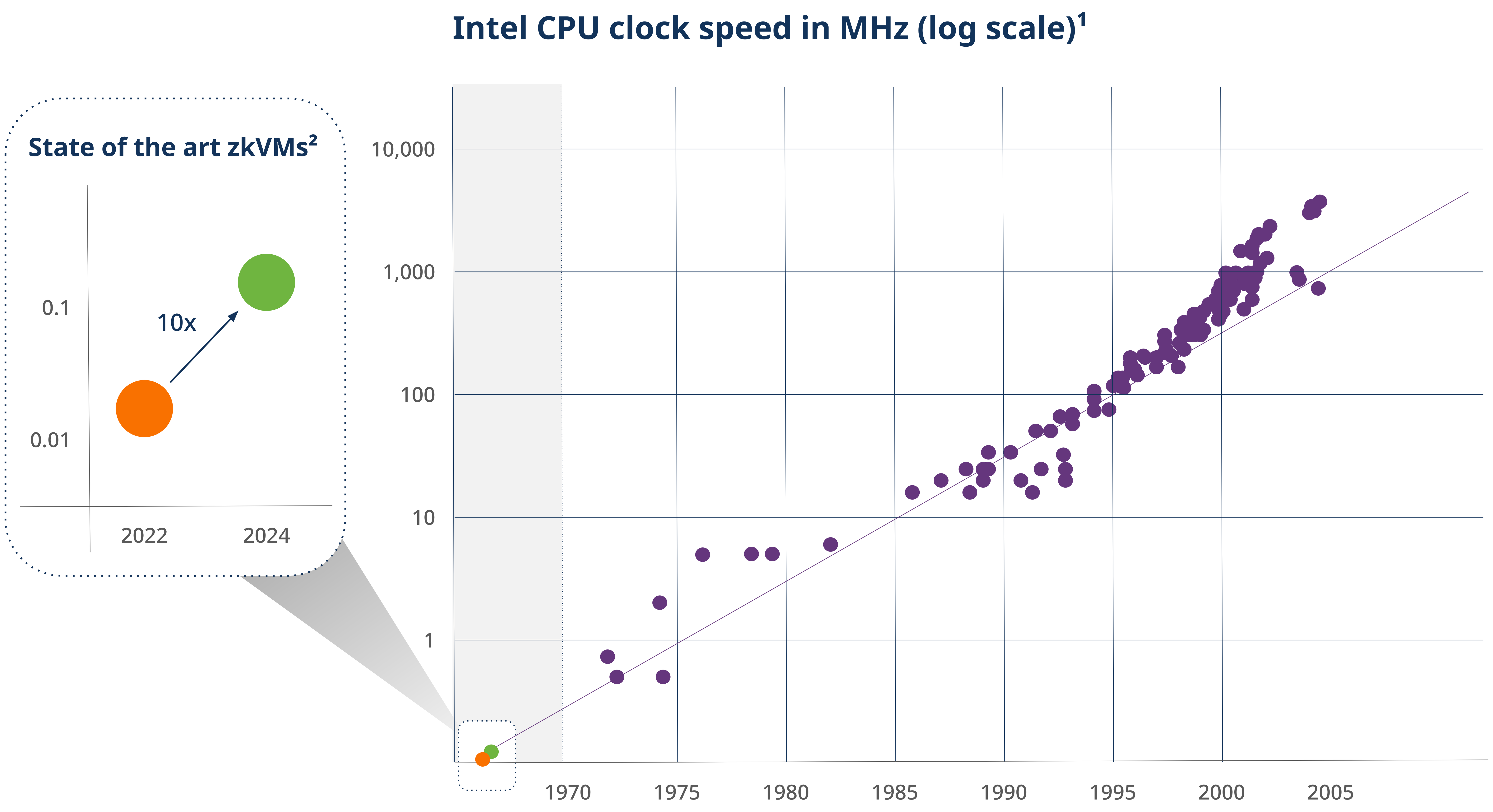
RISC ZERO

Jolt ALPHA

Succinct

Zero knowledge is used as a catch-all for cryptography that can succinctly prove that offloaded computations were performed correctly.

Zero knowledge virtual machines (zkVMs) are improving, but there is still a long way to go

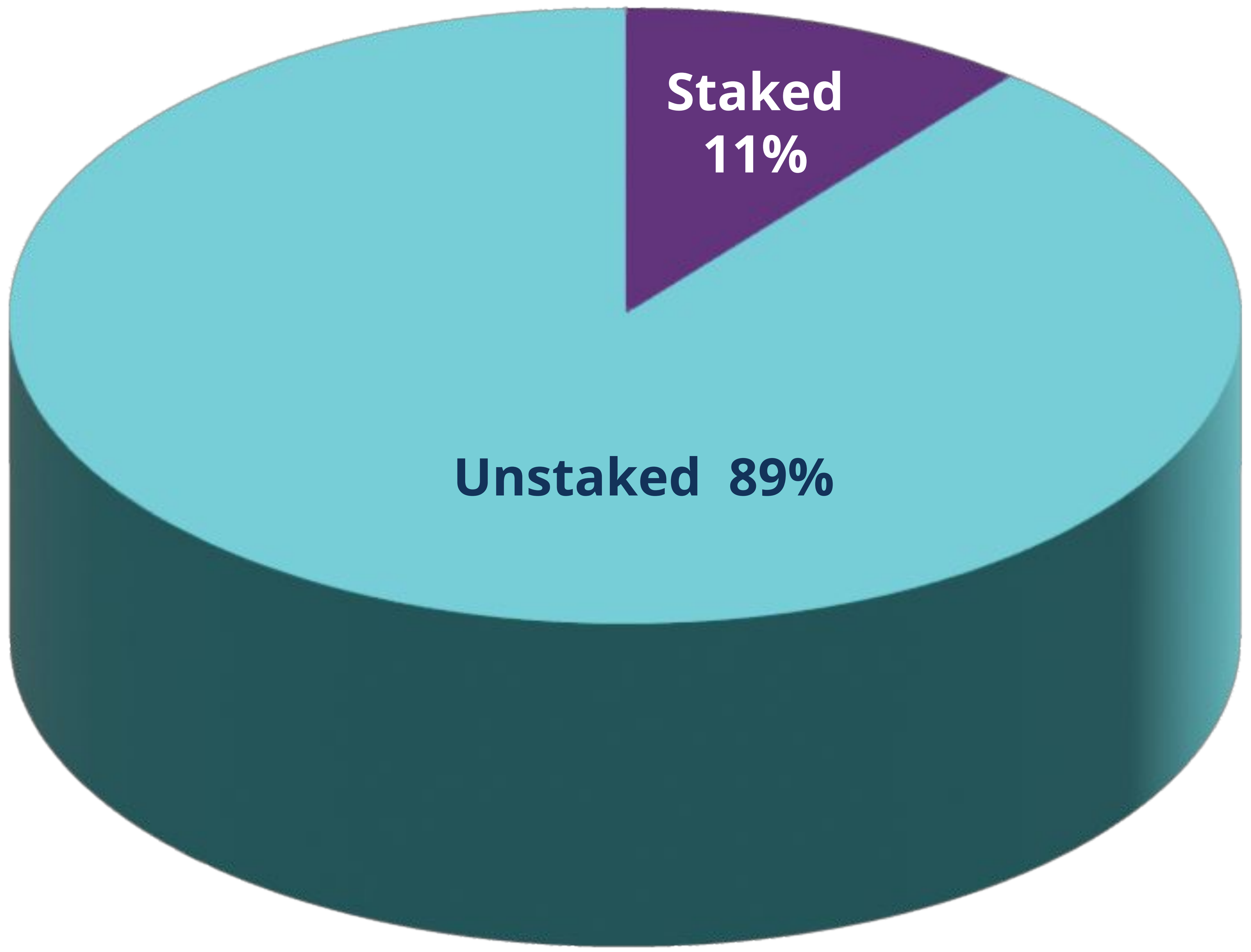


zkVMs allow developers to write programs in high-level, programmer-friendly languages like Rust or Go without requiring any knowledge of the underlying math that proves their execution. But the improved usability typically adds significant performance overhead.

Sources: 1/ Intel, Wikipedia, K. Olukoton (published by Bruno Carpentieri in 2015) 2/ a16z crypto analysis as of 9/30/2024.

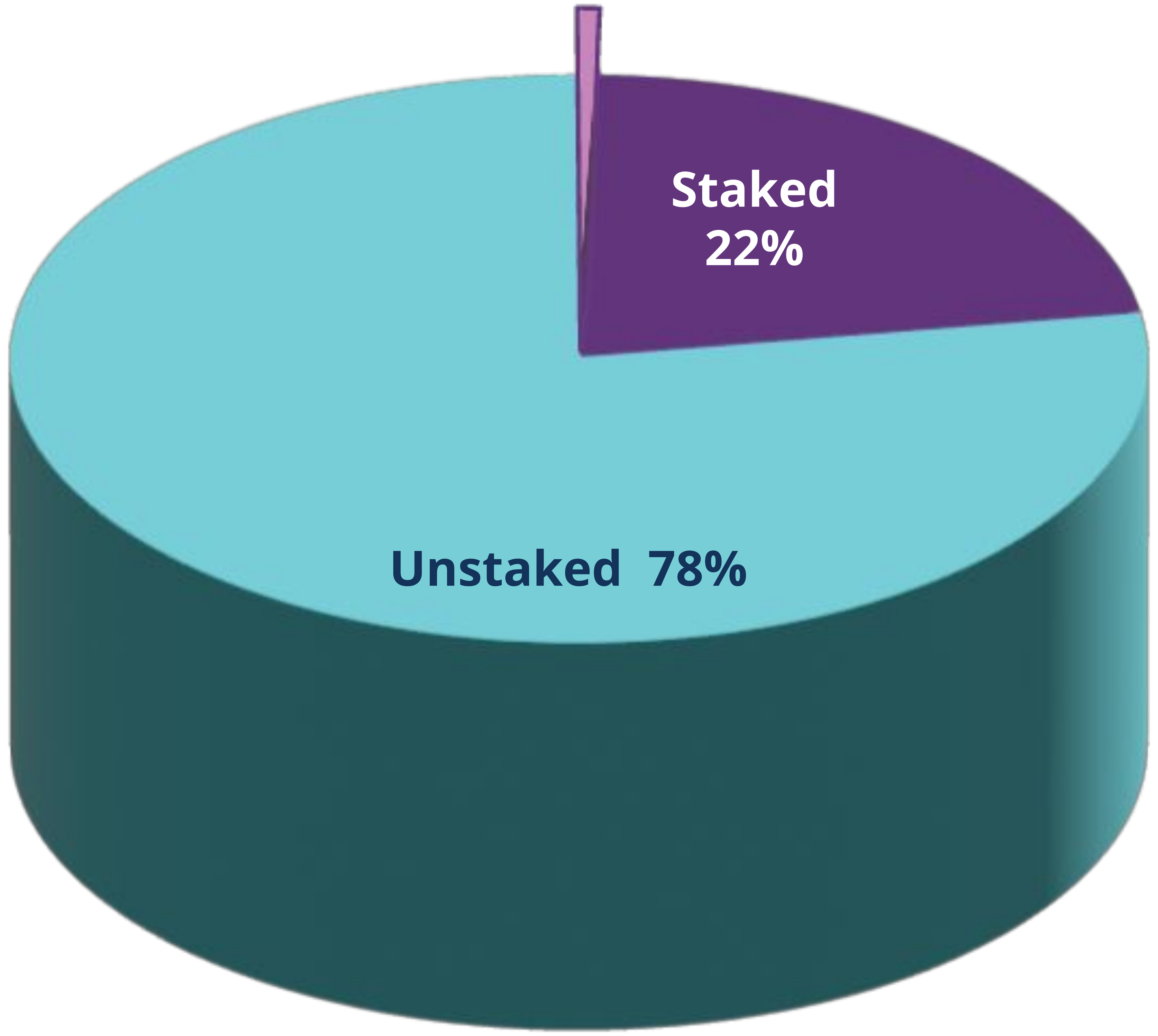
The share of ETH being staked — and sometimes re-staked — is up and it's increasing the security of the network

Pre-Merge



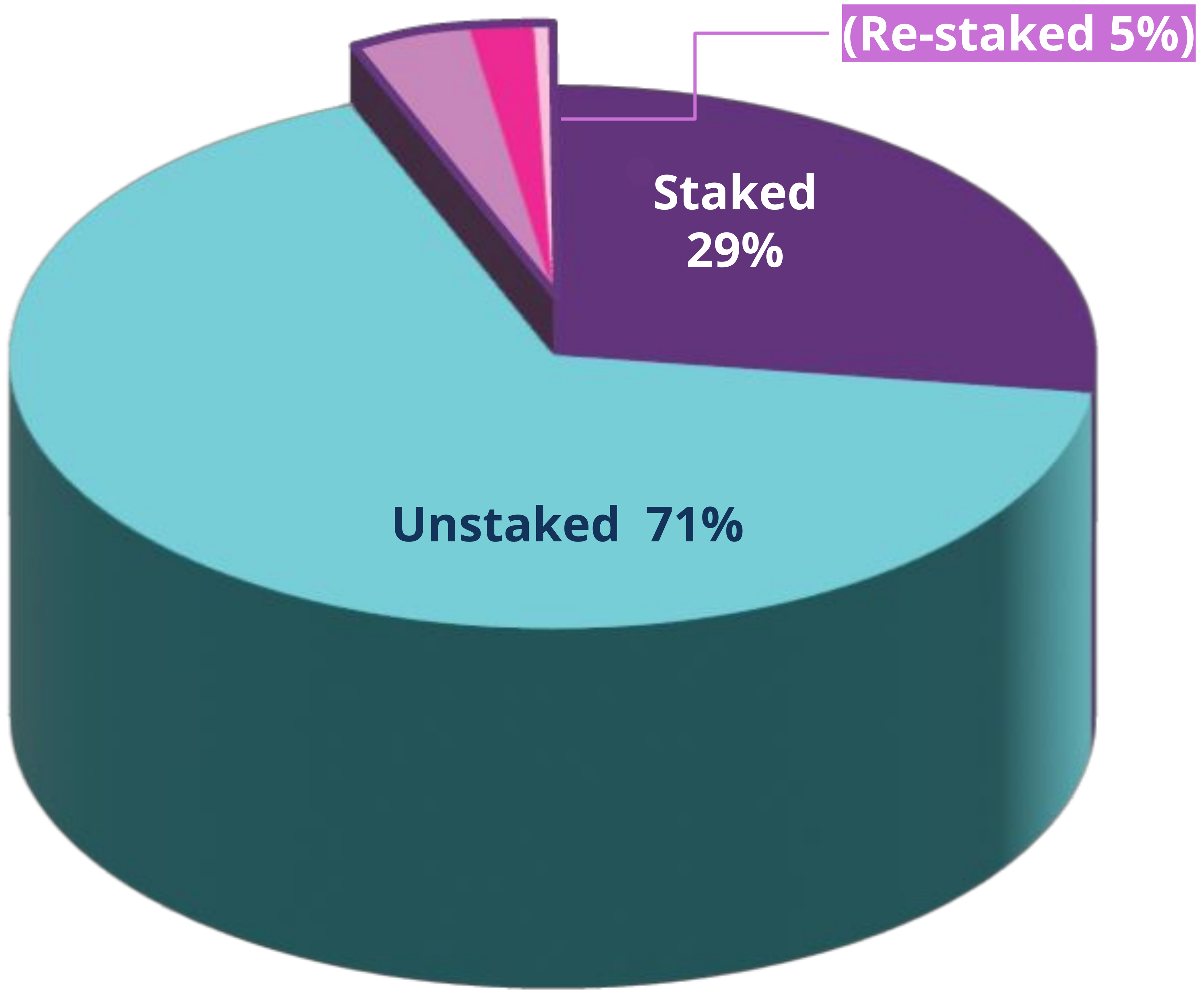
Sept 2022

1 year post-Merge



Sept 2023

2 years post-Merge



Sept 2024

Eigenlayer Symbiotic Karak

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This content should not be considered investment advice.

Sources: Etherscan, beaconcha.in, and Dune (@blocklytics) as of 9/30/2024.

Key applications are emerging

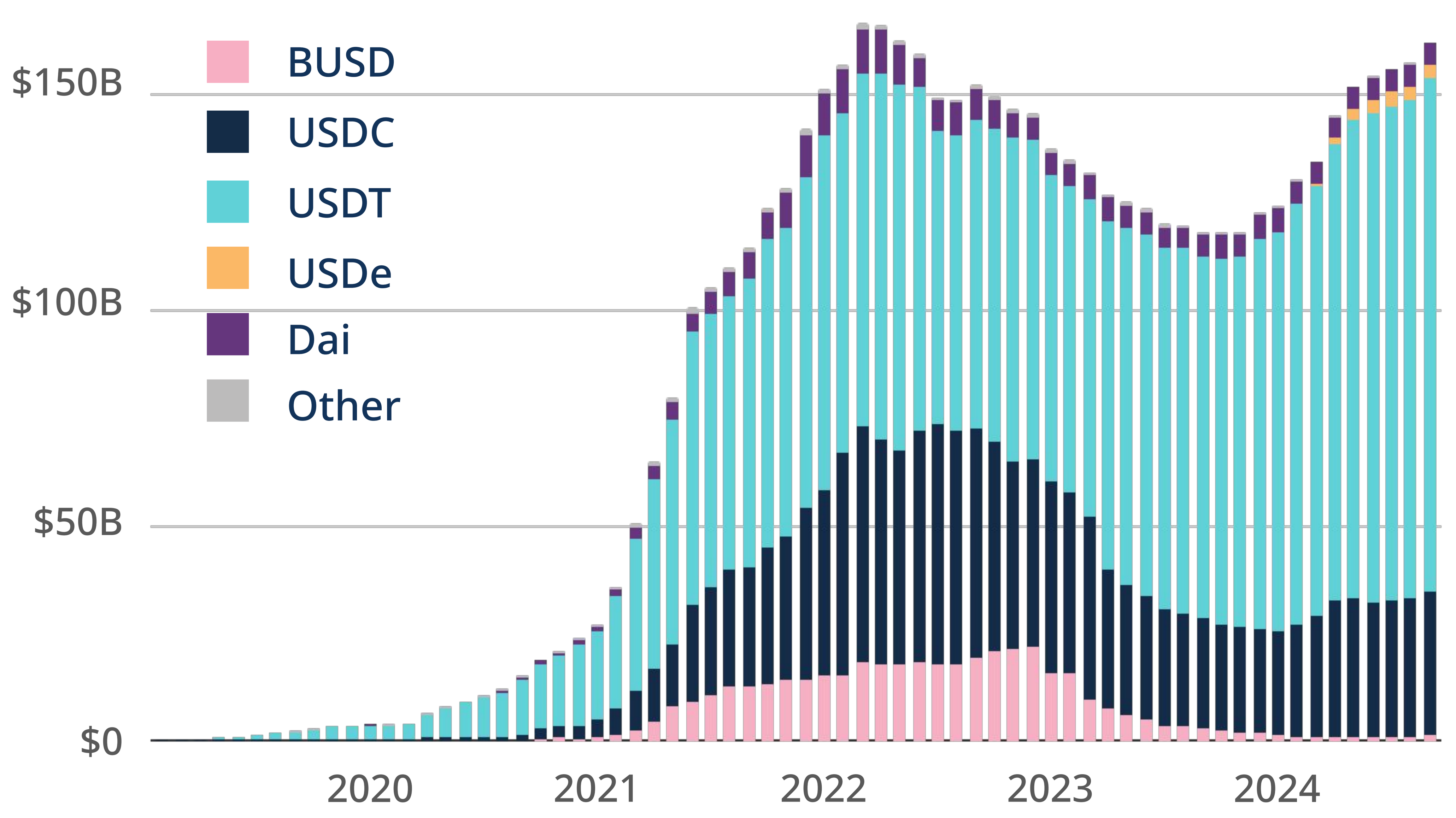
Stablecoins | Crypto x AI | NFTs | DeFi | Prediction Markets | DAOs | DePIN | Gaming | Social

DeFi and stablecoins dominate crypto usage today — emerging categories include gaming and social

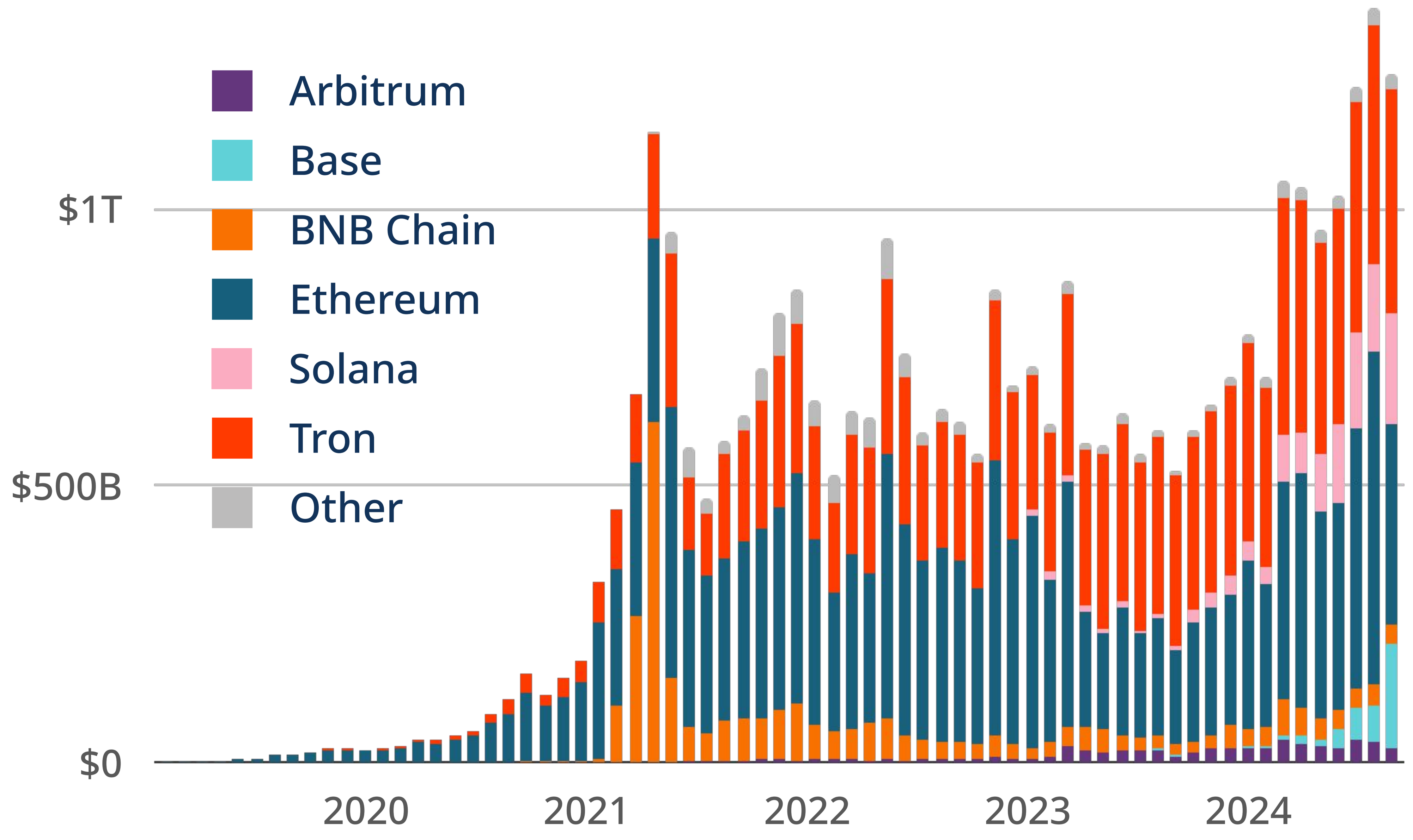
Category breakdown by daily active addresses (all blockchains)

Active addresses can be associated with more than one category.
Source: Artemis as of 9/30/2024, excludes wallet-to-wallet transfers.

Stablecoin supply by issuer[1]



Adjusted transfer volume[1] by blockchain



Stablecoins have found product market fit

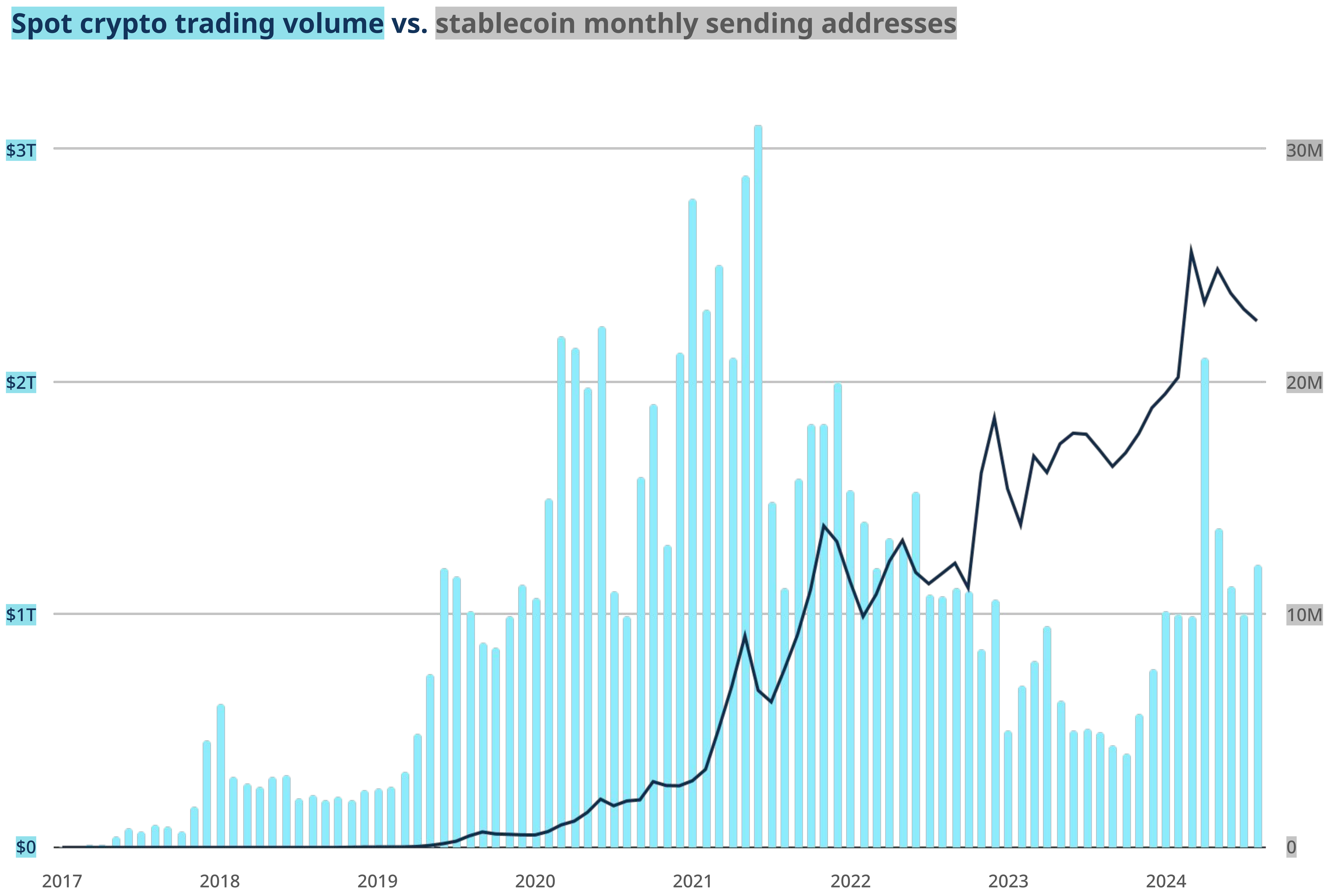
Stablecoins vs. Paypal, Visa, ACH, and Fedwire in Q2 2024[2]

	Transaction volume ($)	# of transactions
Stablecoins	**$8.5 tn**	**1.1 bn**
PayPal	$0.42 tn	6.6 bn
Visa	$3.96 tn	59.3 bn
ACH	$21.6 tn	8.3 bn
Fedwire	$284.2 tn	0.05 bn

1/ Source: Artemis as of 9/30/2024 | Adjusted transfer volume is designed to strip out MEV activity and intra-centralized exchange transfers, providing a clearer picture of genuine user-driven stablecoin activity.

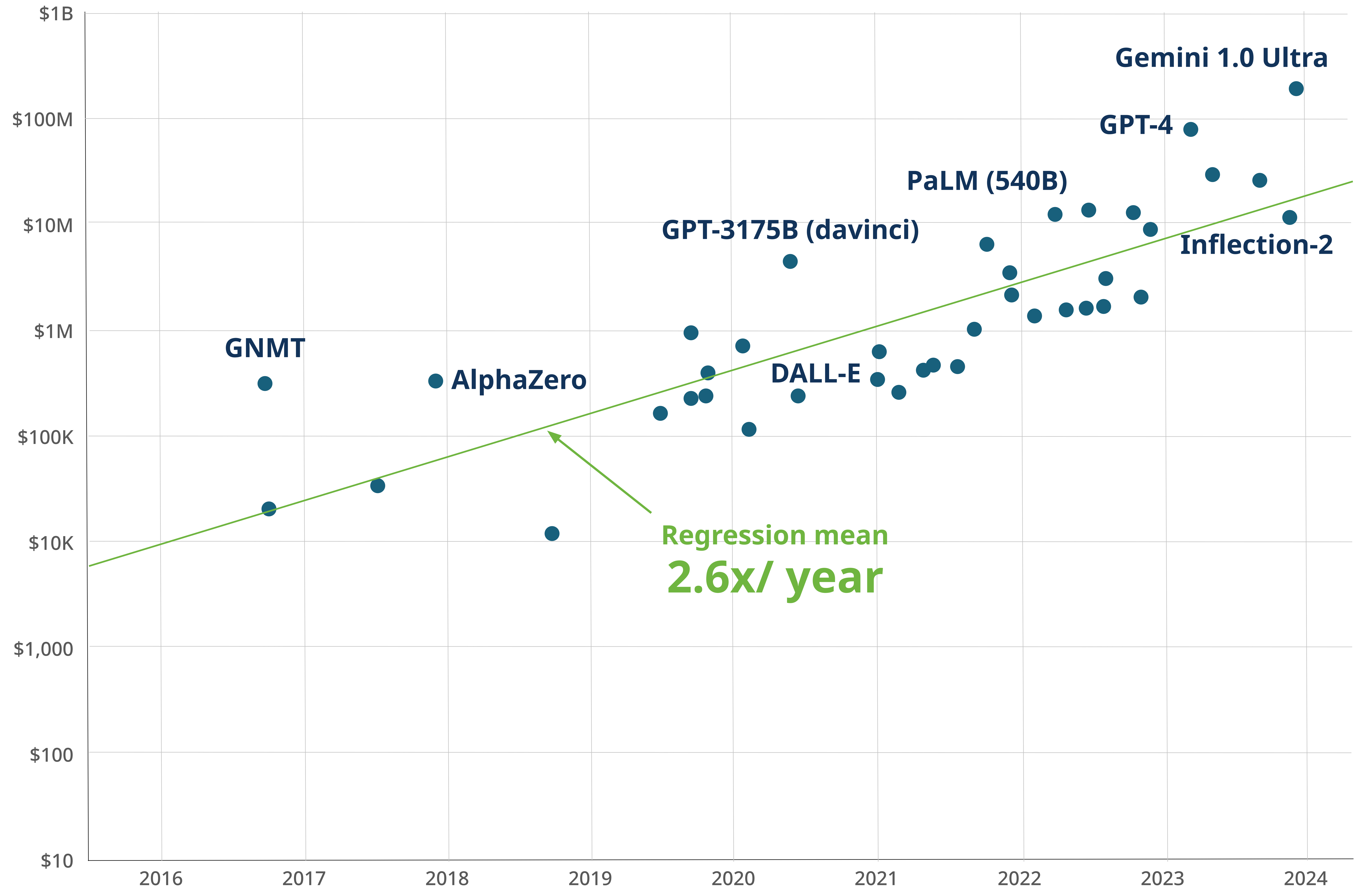
2/ Sources: Artemis, PayPal, Visa, Nacha, FRB Services as of 6/30/2024.

Stablecoin activity has grown despite crypto market cyclicality, highlighting their adoption beyond trading



Source: Stablecoin report by Castle Island Ventures, Brevan Howard Digital, and Artemis (Sept 2024).

Cloud compute cost, in 2023 USD, to train frontier AI models over time (log scale)



AI training costs are growing exponentially, a trend that we believe favors power centralization in the biggest tech companies

Some of the above are a16z investments. For a full list see a16z.com/investment-list.
This content should not be considered investment advice.

Source: Epoch AI (Report from June 2024).

Blockchains can address some of the most pressing challenges facing the AI industry

15+ billion images were created by AI in a year — more than 150 years of photography

Authenticity
blockchains can help verify the authenticity of content

Training compute for frontier AI models has increased **~4x** per year over the last 10 years

Democratization
blockchains can help broaden access to compute

Trust in AI companies fell from **50% to 35%** in the U.S. between 2019 and today

Transparency
blockchains can help create open, user-owned services

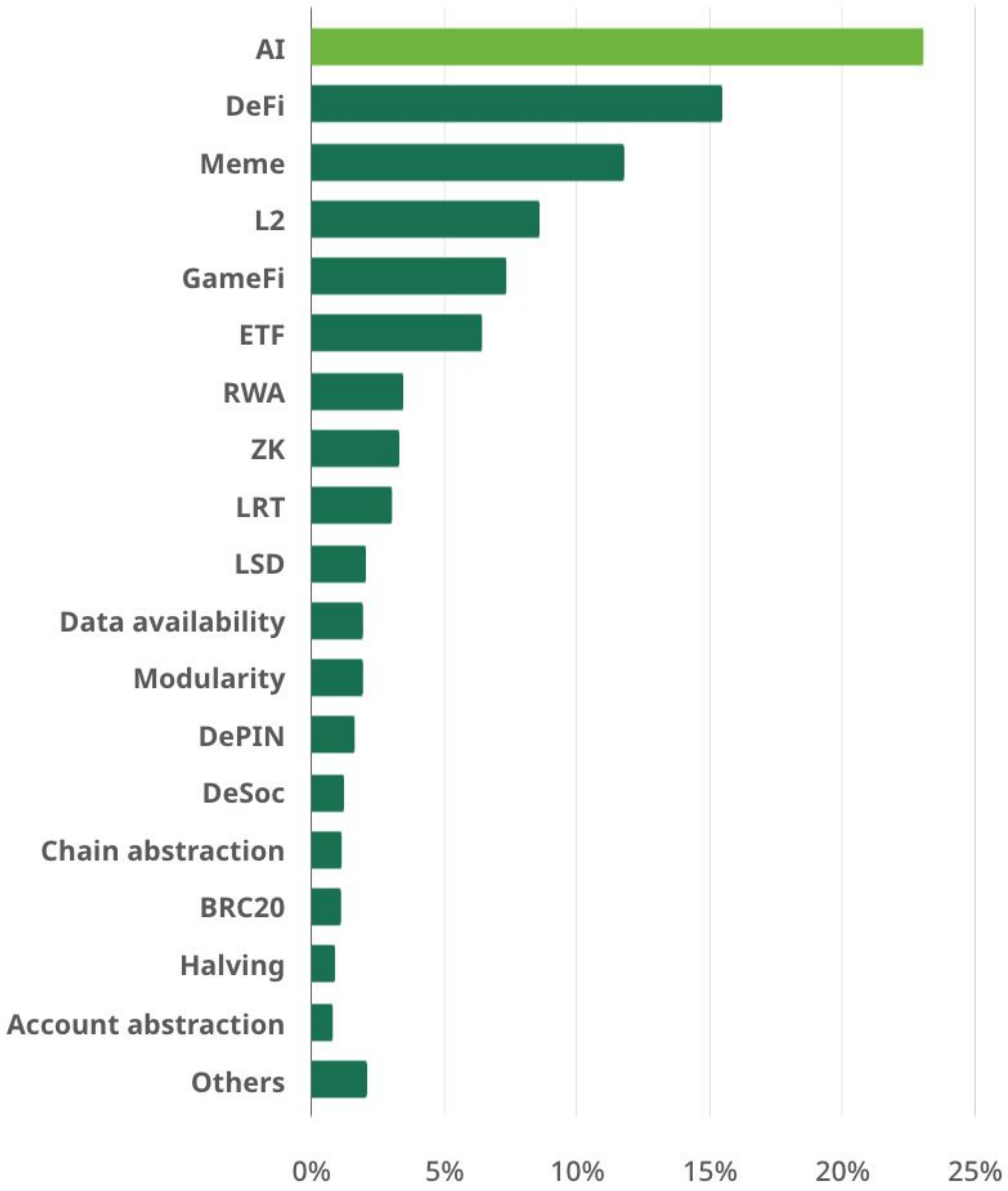
Frontier models are trained on **trillions** of tokens (data units) from mostly unpaid contributors

Ownership
blockchains can help compensate IP and data contributors

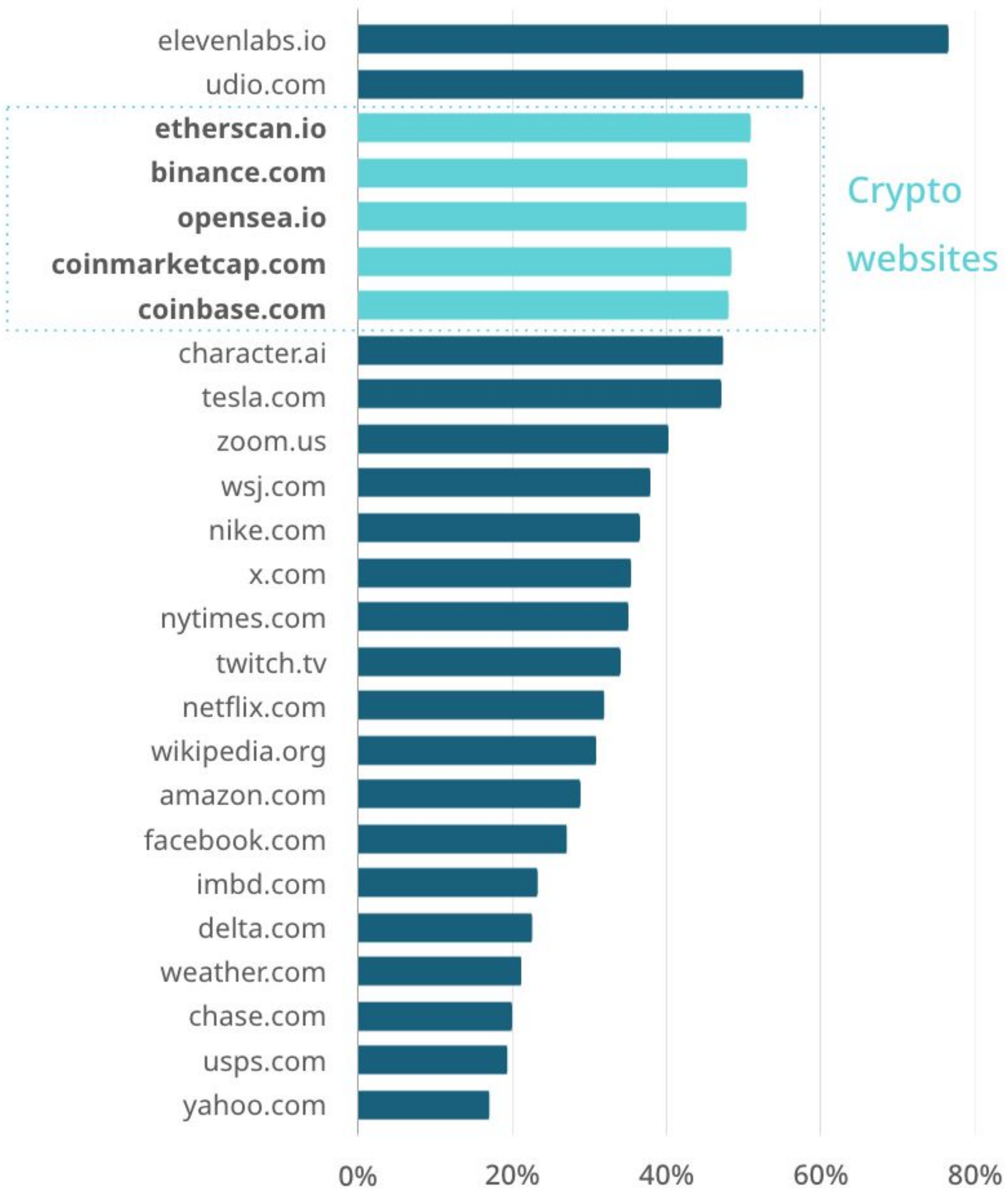
Sources (left to right): EveryPixel (Aug 2023), Epoch AI (Jun 2024), Edelman Trust Survey (Mar 2024), Meta AI Blog (Apr 2024).

There is heavy overlap between crypto and AI users

Narrative mindshare[1] from crypto-related social media



% of website's audience also visiting chatgpt.com[2]

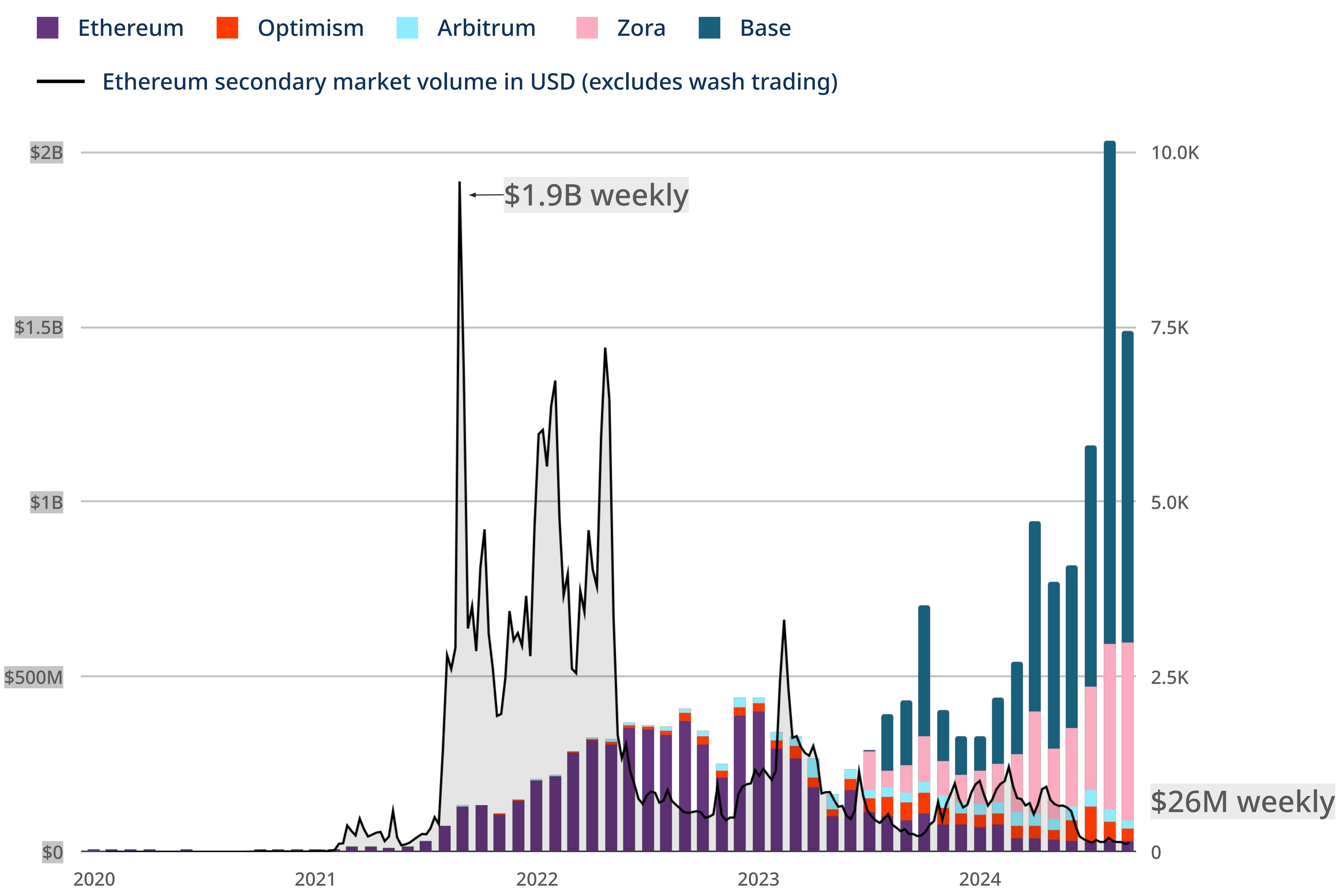


1/ Narrative mindshare measures dominance relative to the overall market by dividing social mentions of each narrative by the number of mentions from people who are considered part of Crypto Twitter (based on Kaito's proprietary search engine and social graph data). RWA is real world assets. LRT is liquid restaking tokens. LSD is liquid staking derivatives. BRC-20 is a Bitcoin token standard | Source: Kaito (via @sandraaleow)

Some of the above are a16z investments. For a full list see a16z.com/investment-list. This content should not be considered investment advice.

2/ Source: SimilarWeb as of Aug 2024.

Number of NFT collections with 50+ unique minters, by blockchain and month



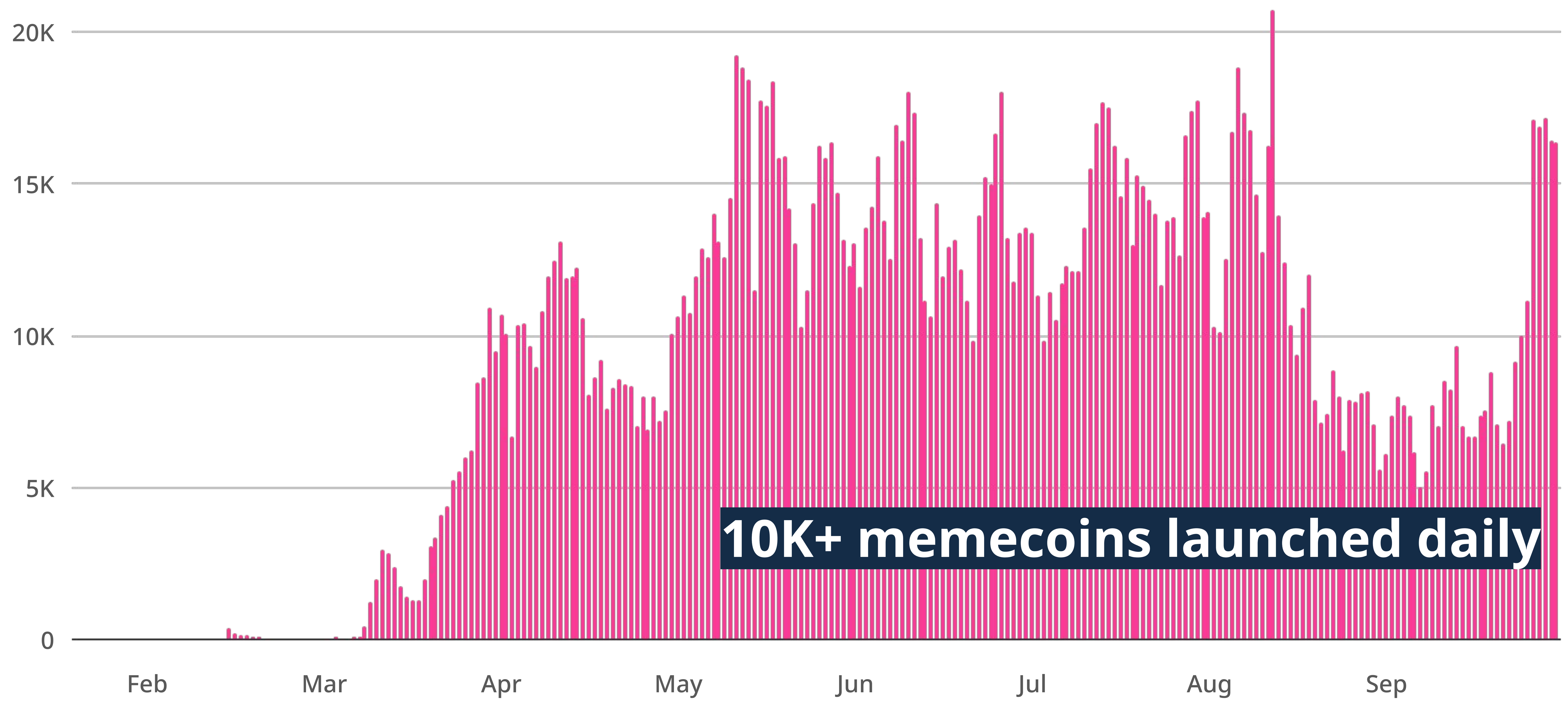
NFT activity appears to have shifted from high-volume secondary markets to low-cost **social collecting** experiences

Some of the above are a16z investments. For a full list see a16z.com/investment-list.
This content should not be considered investment advice.

Sources: Dune (@DarenMatsuoka and @hildobby) as of 9/30/2024.

Today’s regulatory environment has enabled speculative memecoins to proliferate

Number of Solana memecoins created daily in 2024



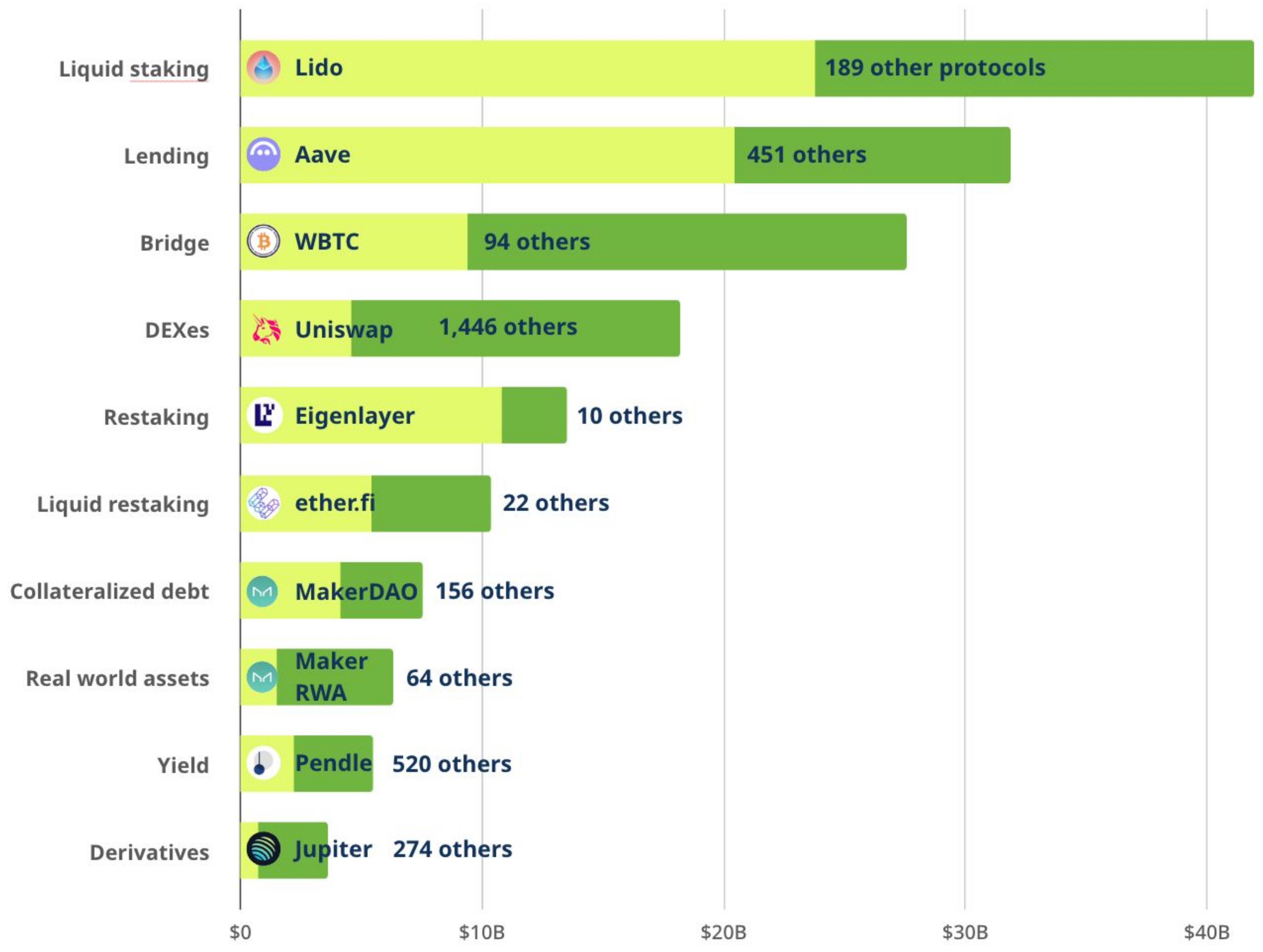
TOKEN	PRICE
#1 WP $WIF / SOL dogwifhat	$2.24
#2 WP POPCAT / SOL Popcat	$1.21
#3 WP ORCA / SOL Orca	$2.27
#4 MOODENG / SOL Moo Deng	$0.1387
#5 CPMM VINU / SOL Vita Inu	$0.0 7 5885
#6 SASHA / SOL BITCOIN CAT	$0.02051
#7 CLMM SASHA / SOL BITCOIN CAT	$0.02035
#8 wDOG / SOL wrapped dog	$0.01101
#9 coby / SOL coby	$0.005624
#10 SoBULL / SOL SoBULL	$0.004550
#11 Pochita / SOL Pochita	$0.004193
#12 POPE / SOL POPE	$0.004102
#13 Zazu / SOL Zazu	$0.002385
#14 SB / SOL Shark Bee	$0.002185

Solana is an a16z investment. For a full list see a16z.com/investment-list.
This content should not be considered investment advice.

Includes all memecoins launched via Pump.fun and Moonshot launchpads.
Sources: Dune (@tiago4maral) and screenshot from DEX Screener as of 9/30/2024.

Thousands of DeFi protocols now control billions of dollars — and leaders are emerging

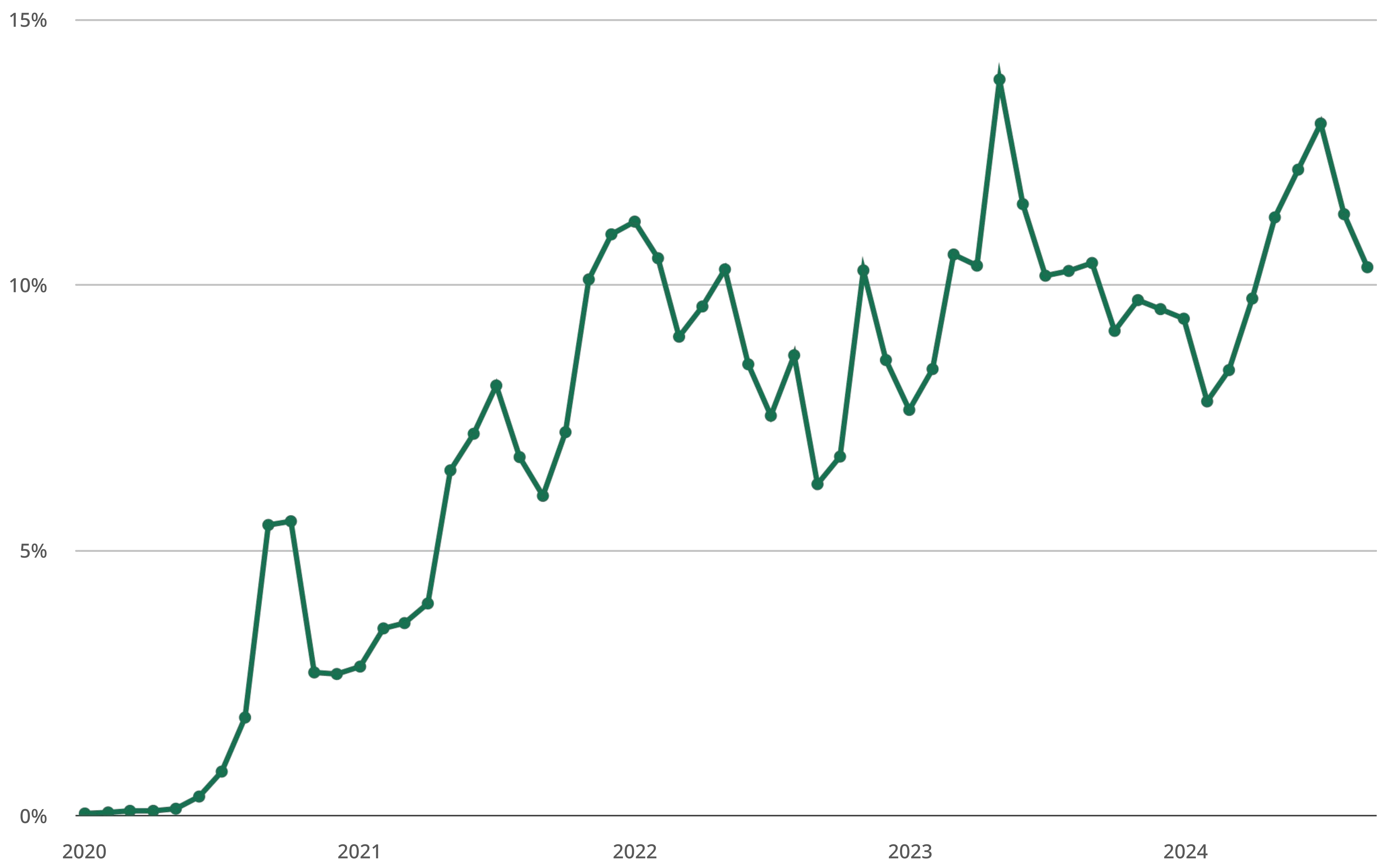
Top DeFi categories by total value locked



Some of the above are a16z investments. For a full list see a16z.com/investment-list.
This content should not be considered investment advice.

Source: DefiLlama as of 9/30/2024.

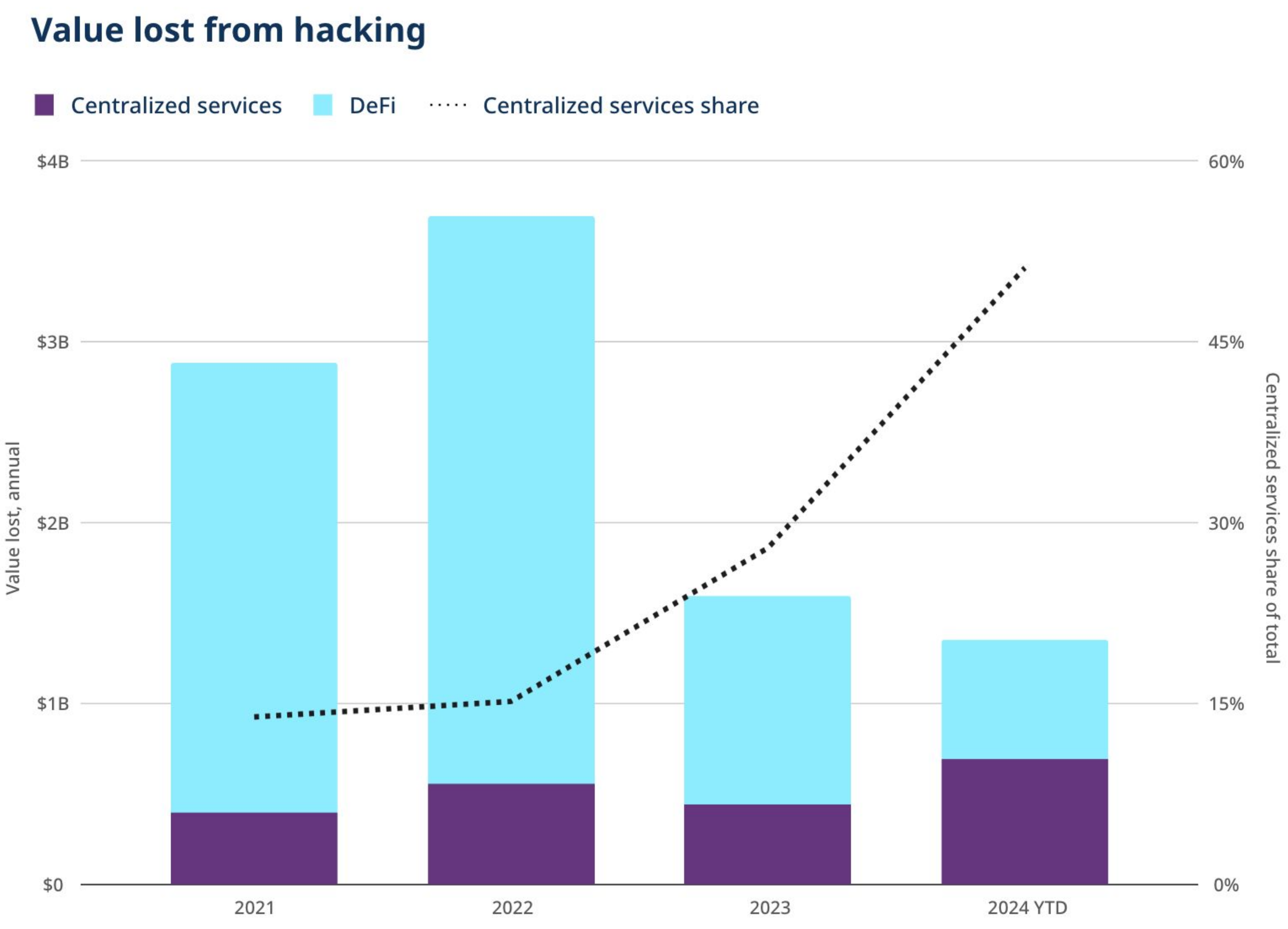
Share of decentralized exchange spot trading volume (%)



Crypto trading is increasingly happening on **decentralized exchanges** since DeFi summer 2020

Sources: The Block and DefiLlama as of 9/30/2024.

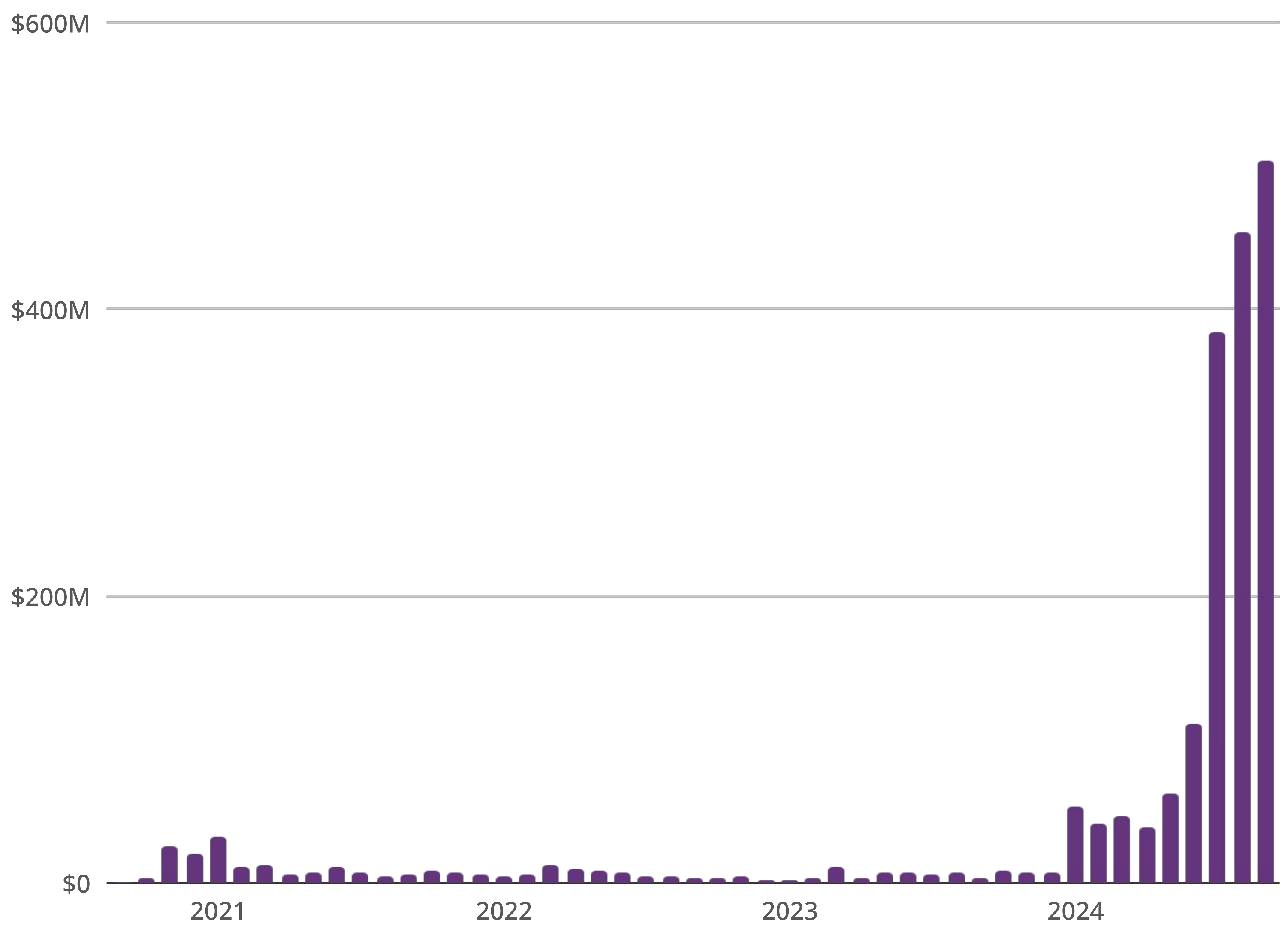
Increased attention to DeFi cybersecurity measures may have driven hackers back to more centralized services

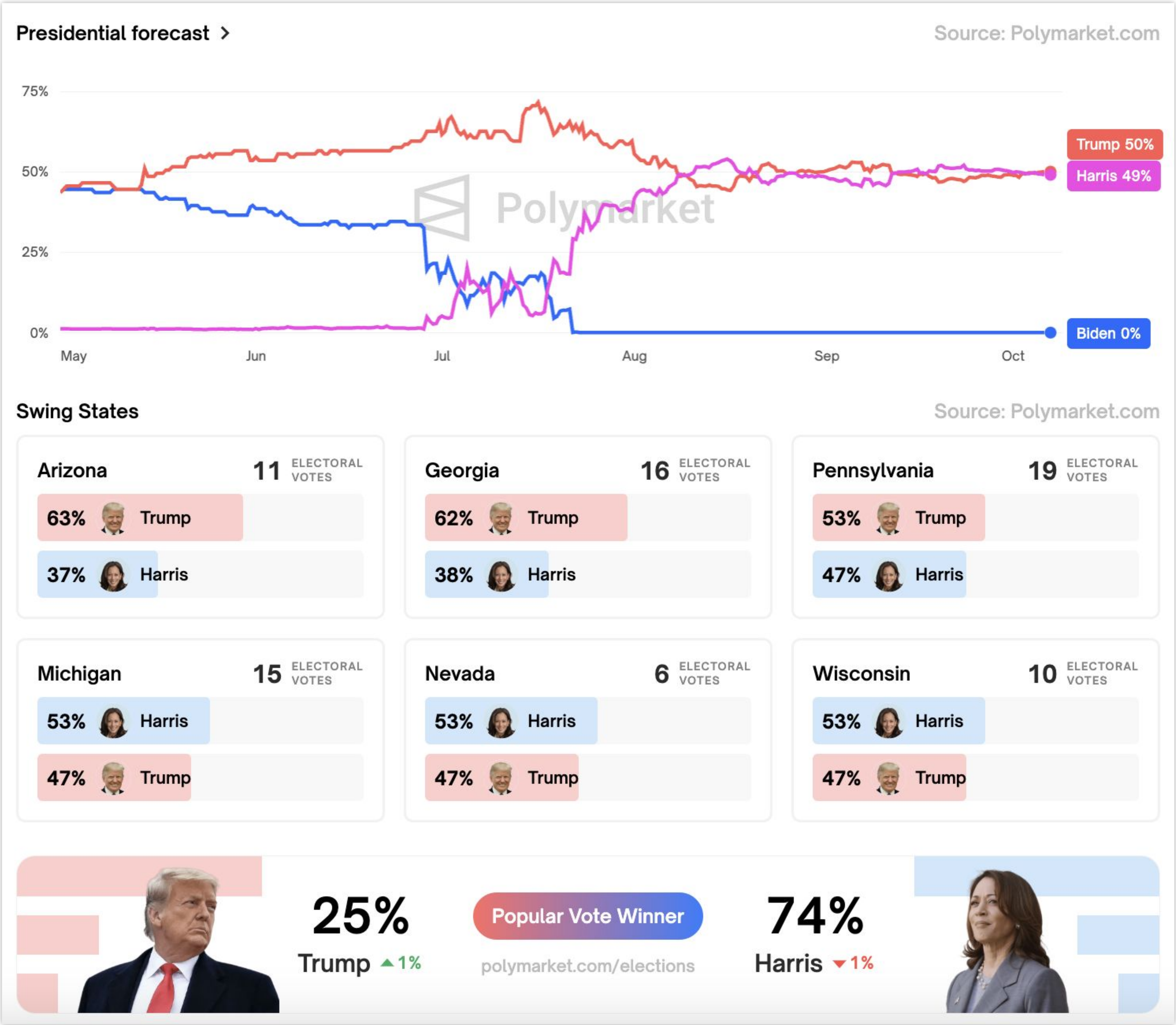


Sources: Chainanalysis Crypto Crime Mid-Year Update (Jul 2024), TRM Labs, FATF.

Interest in crypto-based prediction markets is skyrocketing, especially around elections

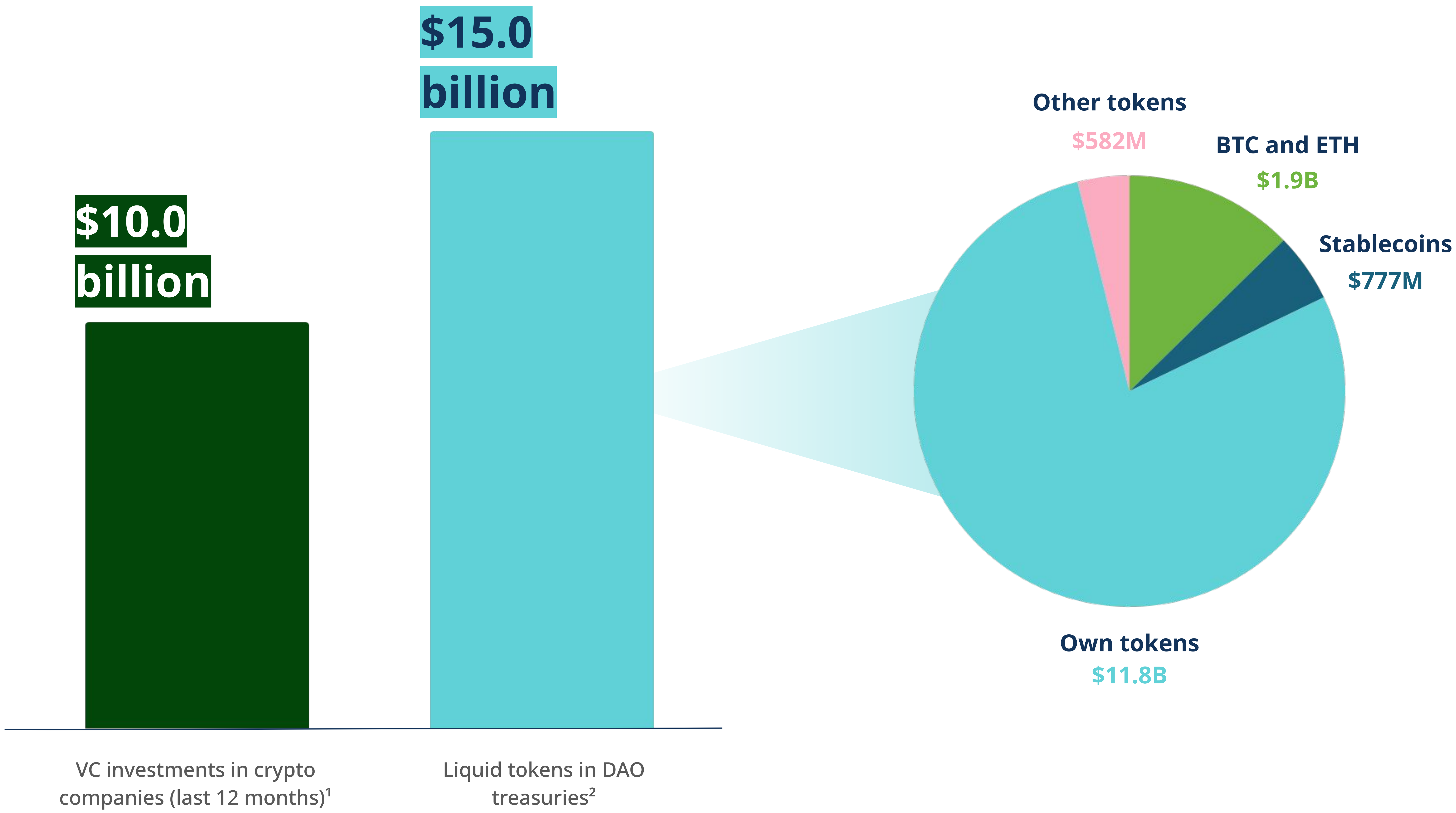
Monthly prediction market volume on Polymarket





Source: Dune (@rchen8) as of 9/30/2024.

VC investments in crypto companies vs. DAO treasury value



DAO treasuries have billions of dollars of liquid tokens that can fuel network improvements

Sources: 1/ PitchBook as of 9/30/2024 2/ DefiLlama as of 9/30/2024.

Decentralized physical infrastructure networks (DePIN) are underpinning nascent services in the physical world

Wireless network

helium

374,743 active hotspots

Vehicle & mobility data

DIMO

113,499 cars connected

Mapping

hivemapper

348 million
kilometers mapped

Energy

Daylight

1,100+ users on testnet

Weather

WEATHERXM

13,499 weather stations

Food delivery

NOSH delivery

224 restaurants in Northern Colorado

Some of the above are a16z investments. For a full list see a16z.com/investment-list.
This content should not be considered investment advice.

Sources: Helium, Hivemapper, WeatherXM, Dimo, Daylight, and Nosh as of 9/30/2024.

Games — long a source of innovation in software — are pushing blockchain scaling to its limits

Ethereum and its rollups sorted by mega gas used per second (Sept 30, 2024)

Gaming blockchain

TOTALS

TPS	Mgas/s	KB/s
348.70	62.80	172.93
(19.81x)	(51.48x)	(30.23x)

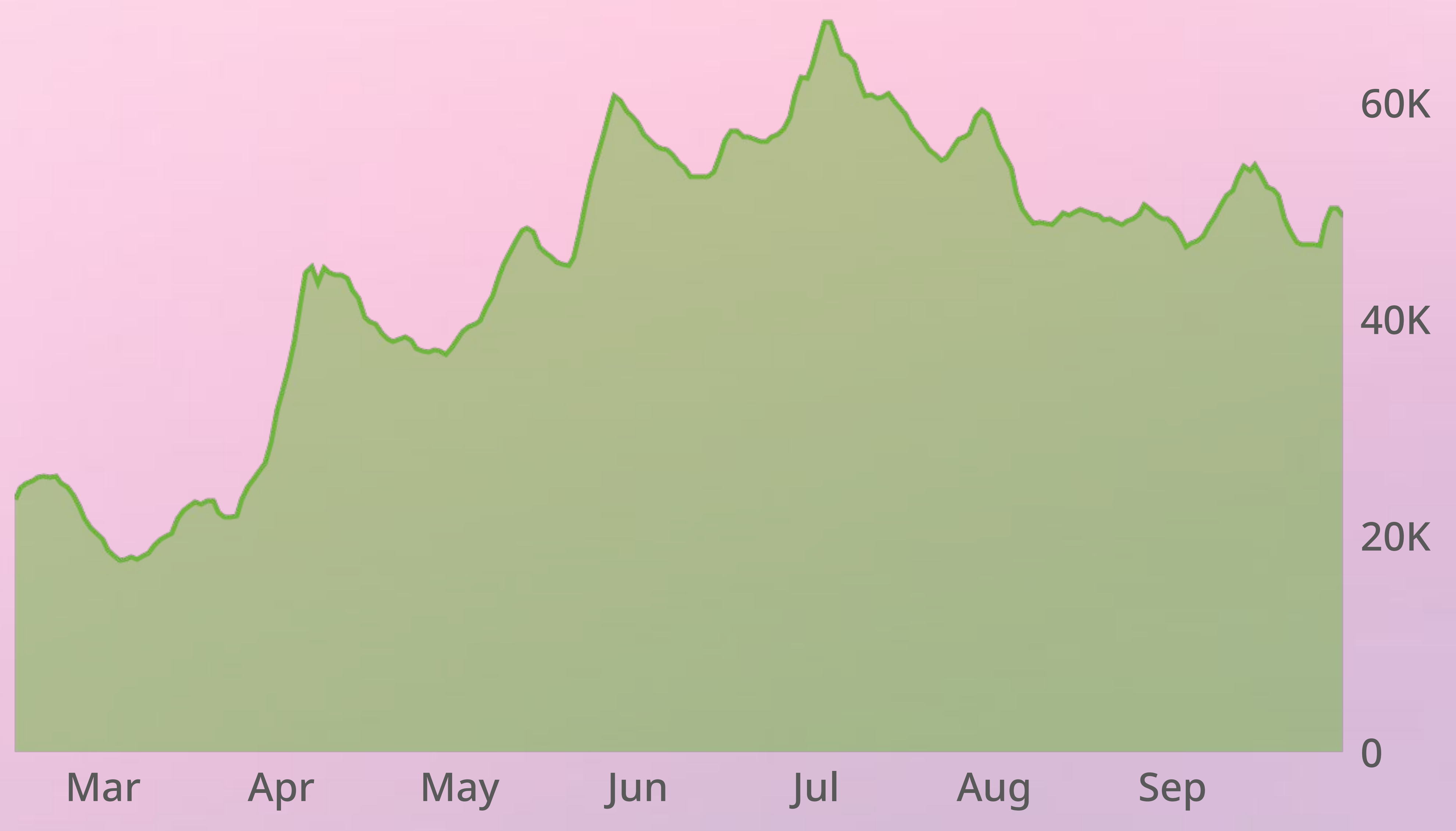
Network	Block	TPS	Mgas/s	KB/s	Stack	DA	Settlement
ProofOfPlay - Apex	50697139	16.5	16.45	10.96	arbitrum-nitro	anytrust	arbitrum
Base	20464204	61.0	9.89	39.32	op-stack	blobs	ethereum
ProofOfPlay - Boss	9803692	9.7	7.04	6.41	arbitrum-nitro	anytrust	arbitrum
Xai	43321074	138.3	6.78	27.82	arbitrum-nitro	anytrust	arbitrum
WINR Chain	11813418	8.4	3.54	6.99	arbitrum-nitro	anytrust	arbitrum
Gravity	8325837	44.5	3.29	18.65	arbitrum-nitro	anytrust	ethereum
ArbitrumOne	258987100	15.3	3.04	11.67	arbitrum-nitro	blobs	ethereum
OP Mainnet	126059489	9.5	2.78	8.96	op-stack	blobs	ethereum
Blast	9453969	6.2	2.72	7.73	op-stack	blobs	ethereum
Mode	13775085	1.0	1.30	0.80	op-stack	blobs	ethereum
Ethereum	20865003	17.6	1.22	5.72	ethereum	ethereum	ethereum
Ham	11127023	0.8	1.04	7.33	op-stack	celestia	base
Scroll	9751915	4.3	0.97	2.44	scroll	blobs	ethereum
Linea	10146944	12.7	0.95	4.96	linea	blobs	ethereum
Mantle	69793722	4.9	0.91	2.39	op-stack	mantle	ethereum
Zora	20511958	0.7	0.60	0.86	op-stack	blobs	ethereum

Some of the above are a16z investments. For a full list see a16z.com/investment-list. This content should not be considered investment advice.

These rollups are networks built on Ethereum designed to increase capacity and lower transaction costs.
Source: rollup.wtf (built by Conduit.xyz), Snapshot taken on 9/30/2024.

It's early days for decentralized social networks, but vibrant developer ecosystems are emerging around protocols like Farcaster

Farcaster daily active users (7d trailing avg) in 2024



Farcaster ecosystem projects

Clients - general

- Warpcast
- Supercast
- Fiids
- nounspace
- Yup
- far.quest
- Litecast
- U3
- herocast

Clients - specialized

- Ketchup
- Buoy
- Searchcaster
- Crew
- Alertcaster
- Launchcaster
- Pincaster
- Sealcaster
- Alphacaster
- Sonata
- Eventcaster
- SayMore
- Absorb
- Kiwi News
- Findcaster
- Web3.bio
- Casterscan
- Opencast
- tofui
- Ponder
- Bountycaster
- 33bits
- Magi
- CasterBites
- Terminal

Tools

- CastStorage
- fcstr
- Sharecaster
- Searchcaster
- Fardrop
- Hatecast
- Farcaster.vote
- Composecast.xyz

Bots

- @remindme
- @launch
- @perl
- @mintit
- @alert
- @survey
- @paragraph
- @bountybot
- @translate
- @ballot
- @events
- @indexer

Community

- Citycaster
- Yash's Directory
- Purple
- FarCon

Services

- Neynar
- Airstack API Studio
- Airstack Explorer
- dTech

Analytics & data

- Intelligent
- Farcaster User Stats
- CastSense
- Trendcaster
- Farcaster Network
- Casterscan
- Goerli Subgraph
- SQLCaster
- Farcaster Insights
- Farcaster Hot 100
- Neynar Frame analytics

Frames

- Frames Intro and Resources
- Farcaster Frame Tech Spec
- Farcaster Frame Text Input
- Farcaster Frame Resources
- Airstack Onchain Kit For Farcaster Frames
- horsefacts.eth's Base mint with Warps
- ncitron.eth's oframl
- topframes.xyz
- Neynar hosted frames

Repos

- standard-crypto/farcaster-js
- a16z/farcaster-py
- TheLDB/farcaster-rs
- ertan/go-farcaster
- wevm/frog
- framesjs/frames.js
- gskril/farcaster-indexer
- BigWhaleLabs/botcaster
- zachterrell57/farcaster-auth
- gskril/farcaster-search
- YashKarthik/frencaster-v2
- whatrocks/farcaster-feed
- noctisatrae/farsign
- davidfurlong/farcaster-auth-tokens
- neynarxyz/farcaster-channels
- Karma3Labs/ts-eigencaster
- fmhall/fc-bot-template
- ponder-surveys/farcaster-survey-bot
- mod-protocol/mod
- pugson/react-farcaster-embed
- Farcaster Solidity
- leo5imon/farcaster-scraper

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Sources: Dune (@pixelhack) and https://github.com/a16z/awesome-farcaster as of 9/30/2024.

What we know about crypto's builders

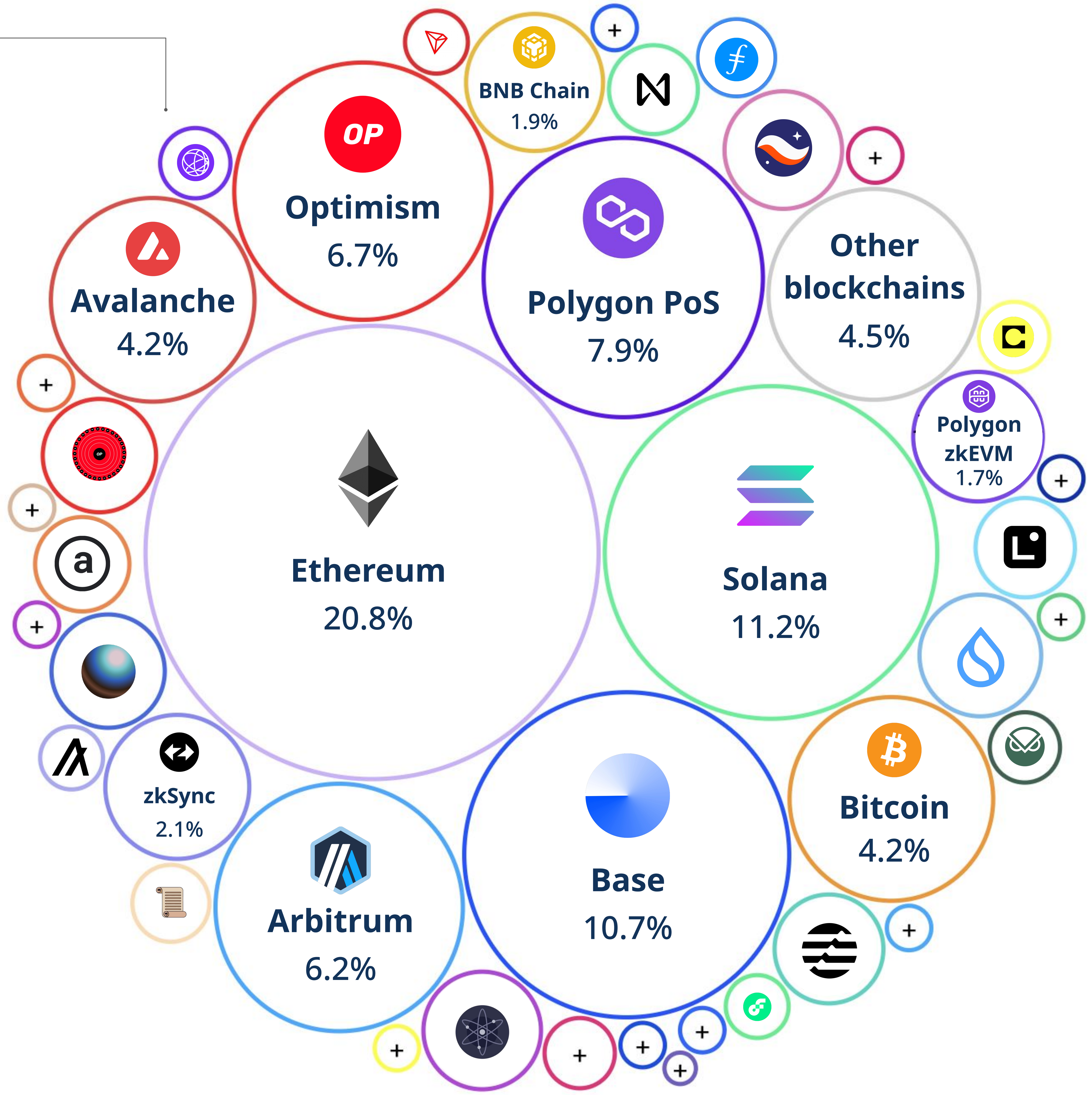
Introducing: Builder Energy Dashboard

A diversity of blockchains are attracting builders, including Ethereum and its adjacent L2 networks, plus Solana, Bitcoin, and others

Builder interest by blockchain

The blockchains that founders say they are — or are interested in — building on

Projects in 2024



Top 5 by change in total share

2023		2024	
5.1%	Solana	11.2%	+6.1
7.8%	Base	10.7%	+2.9
2.6%	Bitcoin	4.2%	+1.6
19.7%	Ethereum	20.8%	+1.1
0.4%	Zora	1.3%	+0.9

Layer two (L2) networks are designed to increase capacity and lower onchain transaction costs. This may exclude some onboarding and exit costs.

Some of the above are a16z investments. For a full list see a16z.com/investment-list. This content should not be considered investment advice.

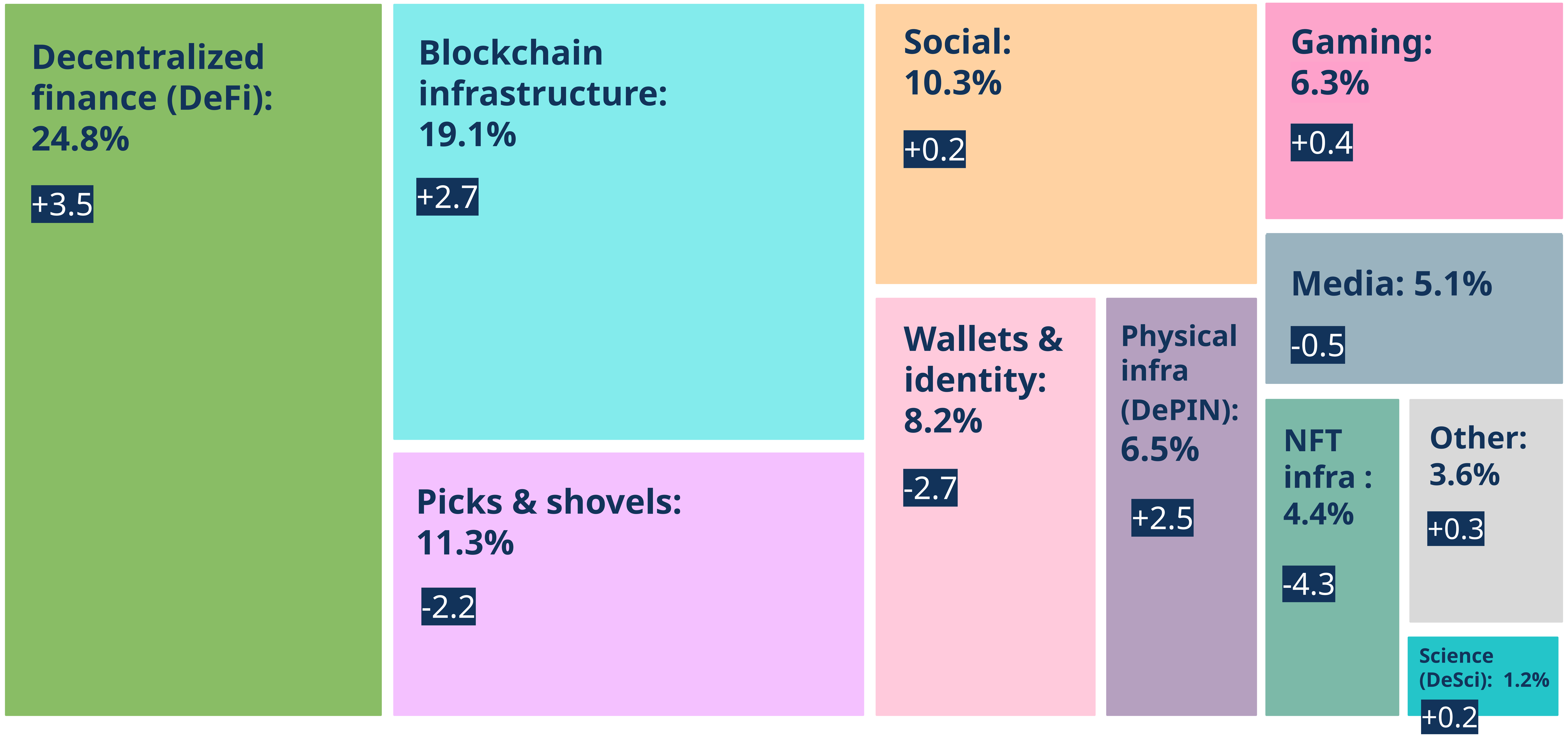
Source: a16z crypto's Builder Energy Dashboard is based on data from thousands of crypto projects we've tracked over the past two years, including investment team research, our CSX startup accelerator program, and other industry-wide tracking through Sept 2024. Please note this does not include all builders or founders and is meant to be for informational purposes only.

DeFi, blockchain infrastructure, and DePIN are some of the hottest categories in 2024 for builder activity

Builder activity by category

Our breakdown of the areas in which projects are building

Projects in 2024 vs 2023



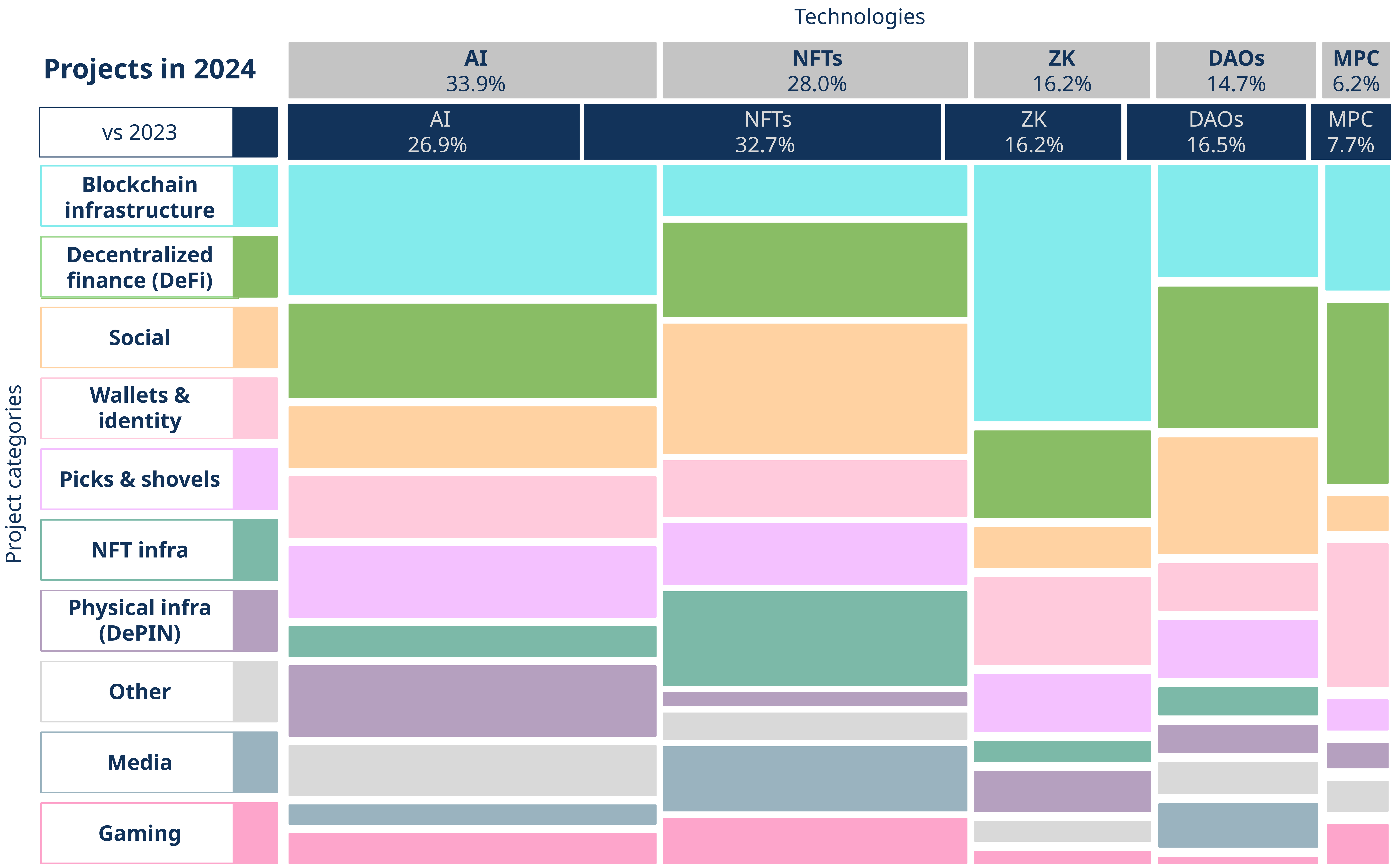
Top subcategories in 2024

DeFi	**Real world assets**
DeFi	**Payments**
Blockchain infrastructure	**L2 blockchains**
DeFi	**Exchange**
Social	**Social networks**

Source: a16z crypto's Builder Energy Dashboard is based on data from thousands of crypto projects we've tracked over the past two years, including investment team research, our CSX startup accelerator program, and other industry-wide tracking through Sept 2024. Please note this does not include all builders or founders and is meant to be for informational purposes only.

Builder activity by applied technology

The technologies that builders are using across categories (boxes show % breakdown by intersection of project category and technology)



Builders show increasing interest in AI in 2024, commonly used by infra, DeFi, DePIN, and picks & shovels projects

Source: a16z crypto's Builder Energy Dashboard is based on data from thousands of crypto projects we've tracked over the past two years, including investment team research, our CSX startup accelerator program, and other industry-wide tracking through Sept 2024. Please note this does not include all builders or founders and is meant to be for informational purposes only.

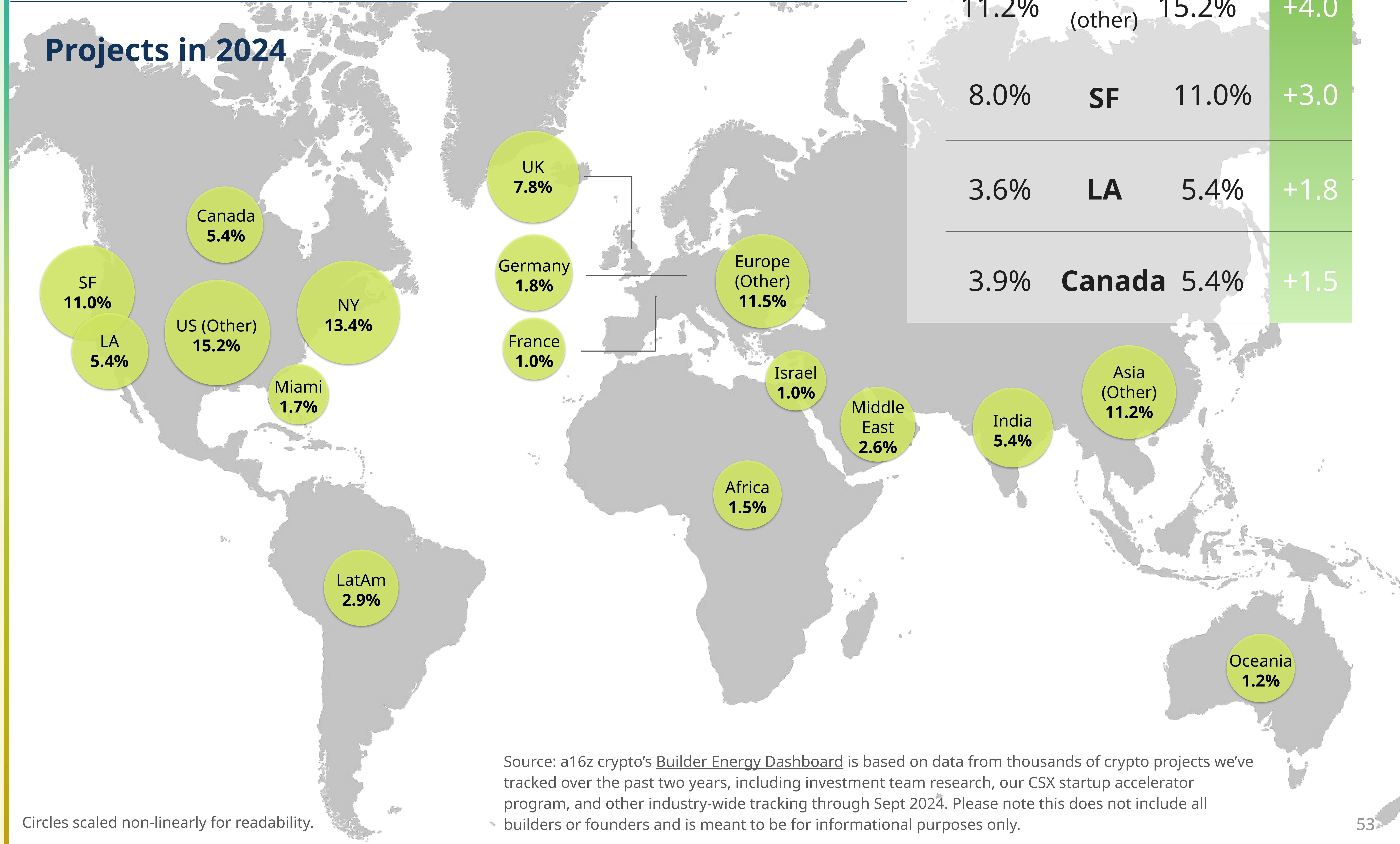
Crypto is international, with builders spread across the U.S., Asia, and Europe

Builders by geography

Where founders say they're based

Top 5 by change in total share

2023	→	2024	
8.3%	NY	13.4%	+5.1
11.2%	US (other)	15.2%	+4.0
8.0%	SF	11.0%	+3.0
3.6%	LA	5.4%	+1.8
3.9%	Canada	5.4%	+1.5



Circles scaled non-linearly for readability.

Source: a16z crypto's Builder Energy Dashboard is based on data from thousands of crypto projects we've tracked over the past two years, including investment team research, our CSX startup accelerator program, and other industry-wide tracking through Sept 2024. Please note this does not include all builders or founders and is meant to be for informational purposes only.

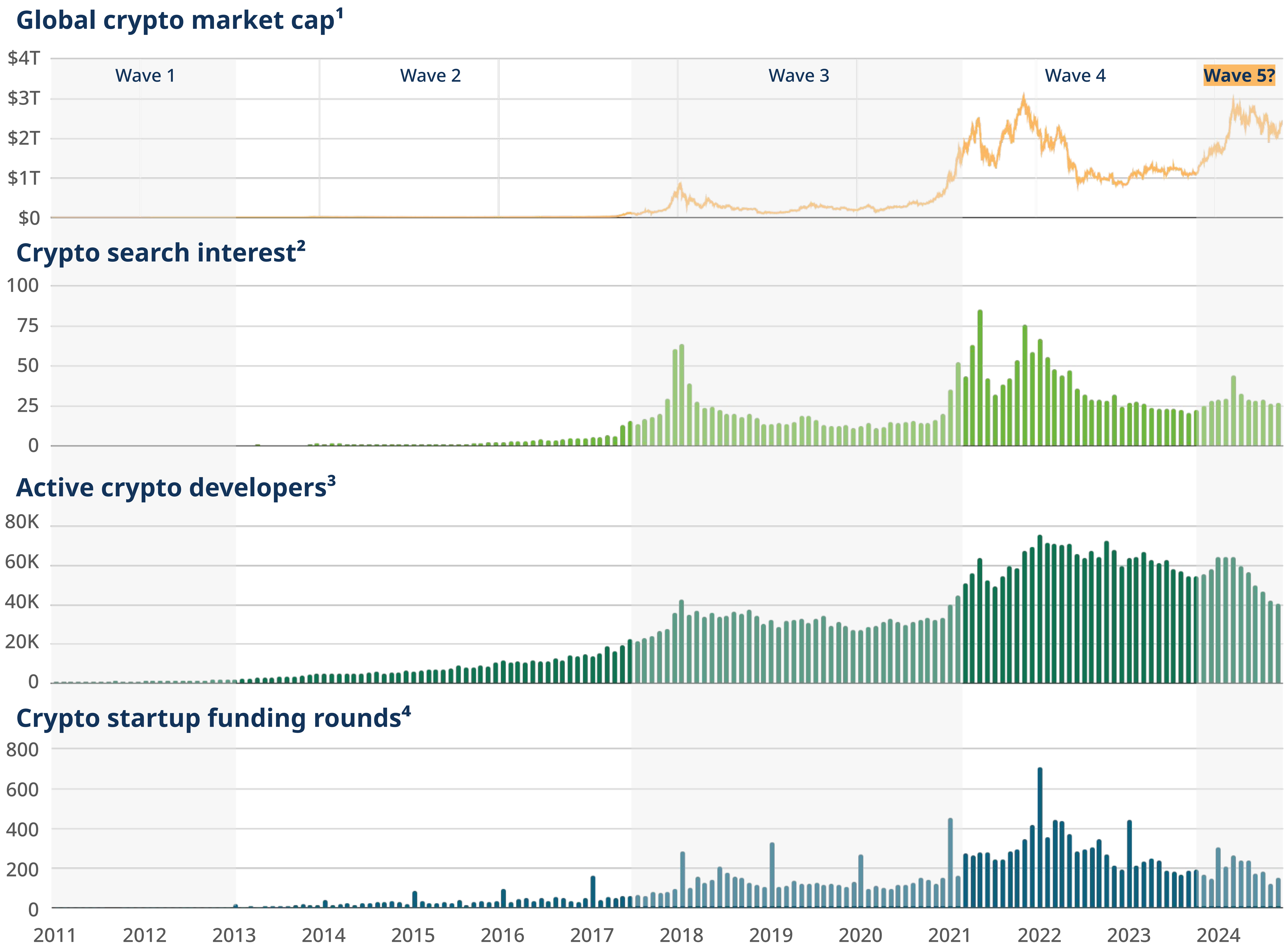
Explore the Builder Energy Dashboard

[Click here to see more]

Source: a16z crypto's Builder Energy Dashboard is based on data from thousands of crypto projects we've tracked over the past two years, including investment team research, our CSX startup accelerator program, and other industry-wide tracking through Sept 2024. Please note this does not include all builders or founders and is meant to be for informational purposes only.

What’s next for crypto?

Are we entering a new wave of the crypto price-innovation cycle — or a false start?



1/ Source: CoinGecko as of 9/30/2024.
2/ Search interest across crypto terms (cryptocurrency, crypto, bitcoin, ethereum, blockchain, web3) | Source: Google Trends + GTAB as of 9/30/2024.
3/ Number of unique GitHub accounts that committed to, forked, or starred a public crypto repository | Source: GitHub + Electric Capital Ecosystems as of 9/30/2024.
4/ Source: PitchBook as of 9/30/2024.

Some of our thoughts for 2024 and beyond...

The price-innovation cycle **will continue to drive the crypto market**. When prices go up, people get interested, developers build, and new products push the industry forward.

Crypto has become a hot political topic. The U.S. elections may generate short-term noise, but over a longer timeframe **we expect key legislation to pass** — resulting in much-needed regulatory clarity for the industry.

Crypto is increasingly global. With prominent political figures now weighing in, many **nation states will seek to quickly develop a crypto strategy**.

Crypto is becoming **accessible to institutional investors**. While spot Bitcoin and Ethereum ETPs are trading today, it will take time for the major distributors to activate. Eventually, crypto could become part of a diversified portfolio.

Blockchain infrastructure is maturing. Nearly all of Ethereum's activity has moved to layer 2, with Coinbase's Base L2 leading the way. The result has been **drastically reduced fees for users** that unlock new applications.

L2s aren't the only way to scale blockchains. Other high-throughput blockchains are on a promising path. In addition, **ZK-coprocessors present a whole new programming paradigm** for scaling computation.

Blockchains can counterbalance AI's tendency to consolidate power on the internet. We expect to see **significant development at the intersection of these technologies**.

Stablecoins are emerging as crypto's first "killer app." As fees come down and more people are onboarded with crypto wallets, we could reach a tipping point where strong network effects kick in. Regulation will play an important role in determining winners in this category.

The potential for bigger ideas — decentralized social networks, a new consumer internet, the metaverse — may take longer to realize, but interesting **early experiments are gaining traction**.

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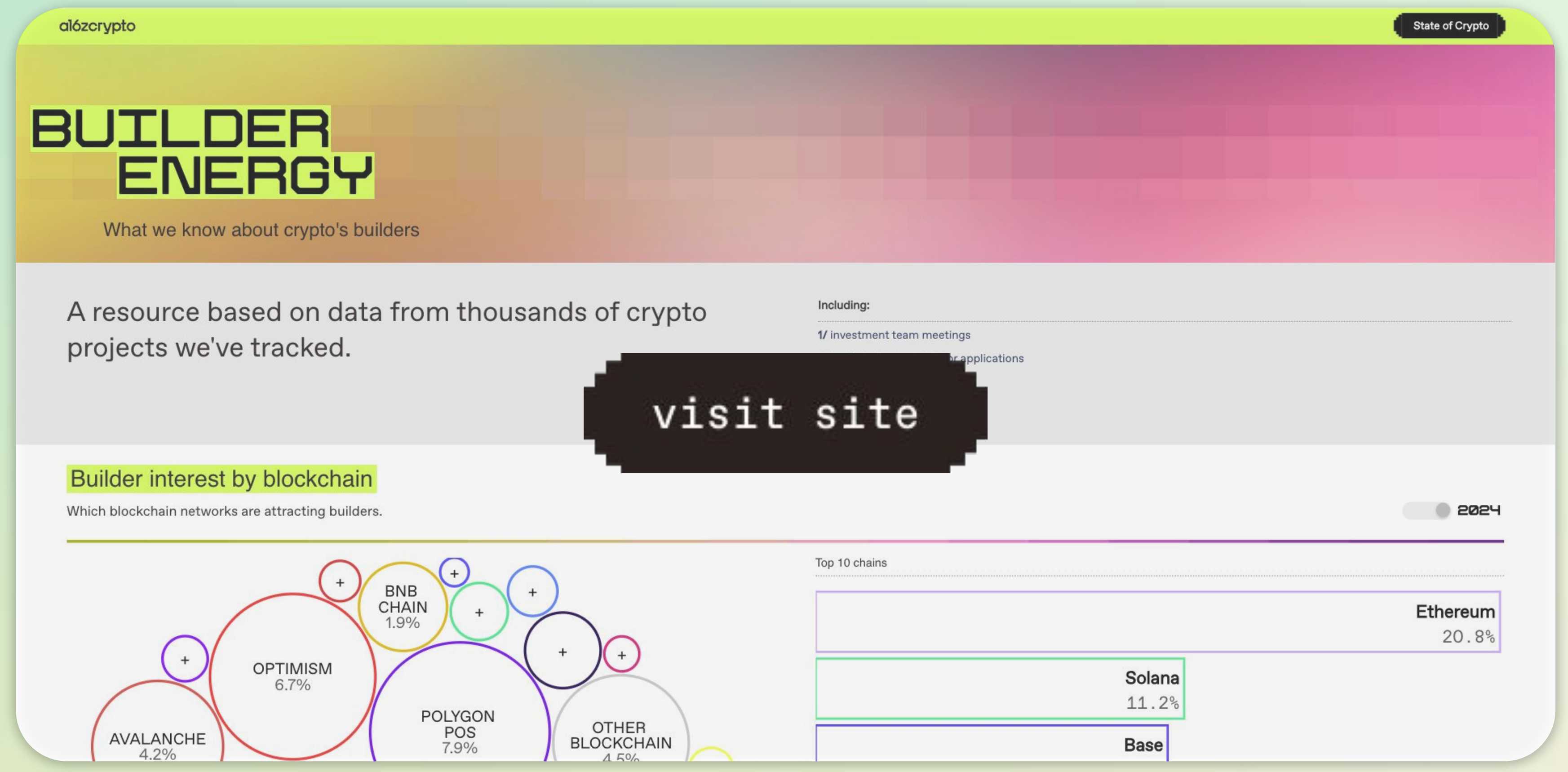
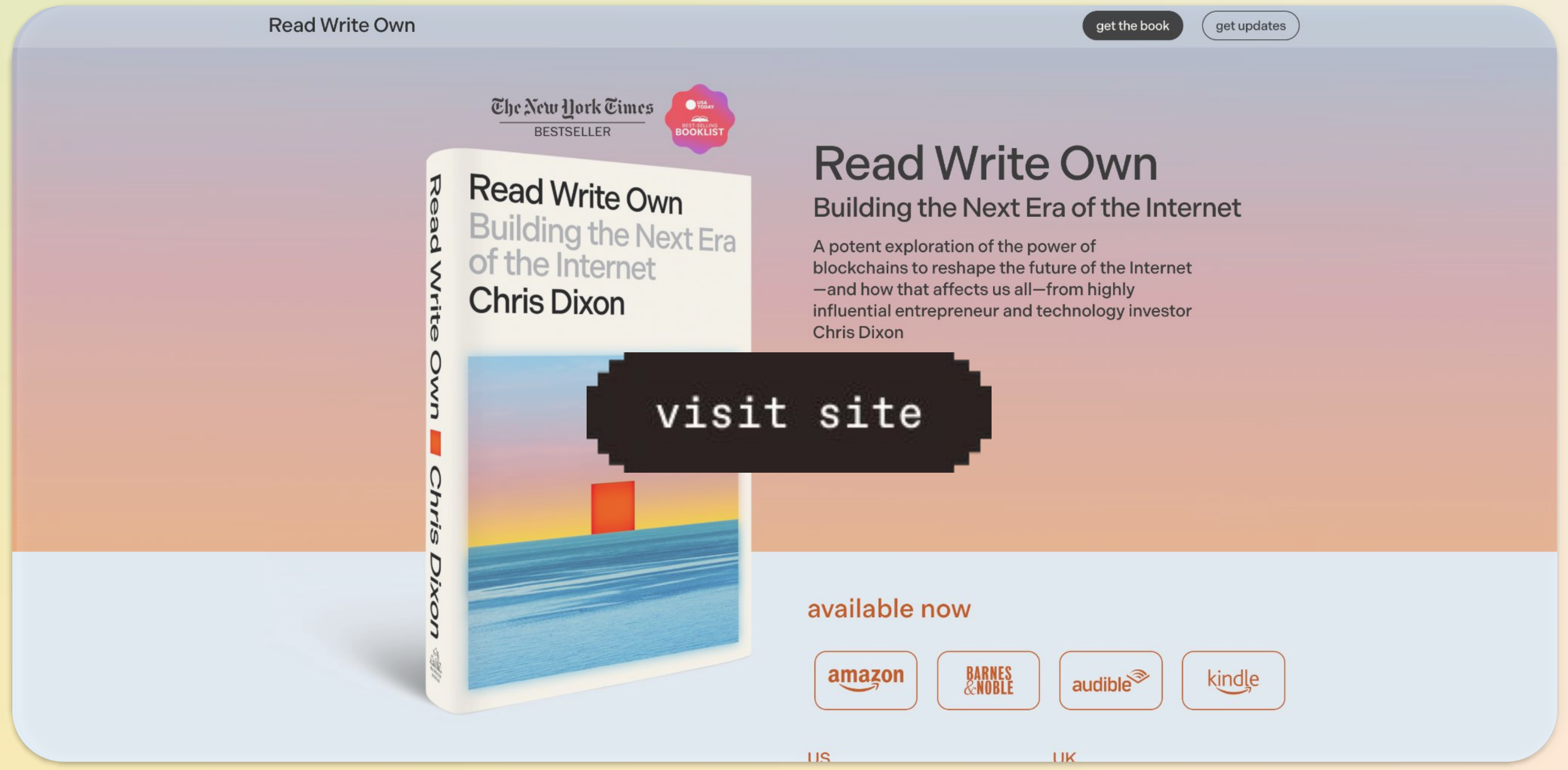
Learn More

Builder Energy Dashboard

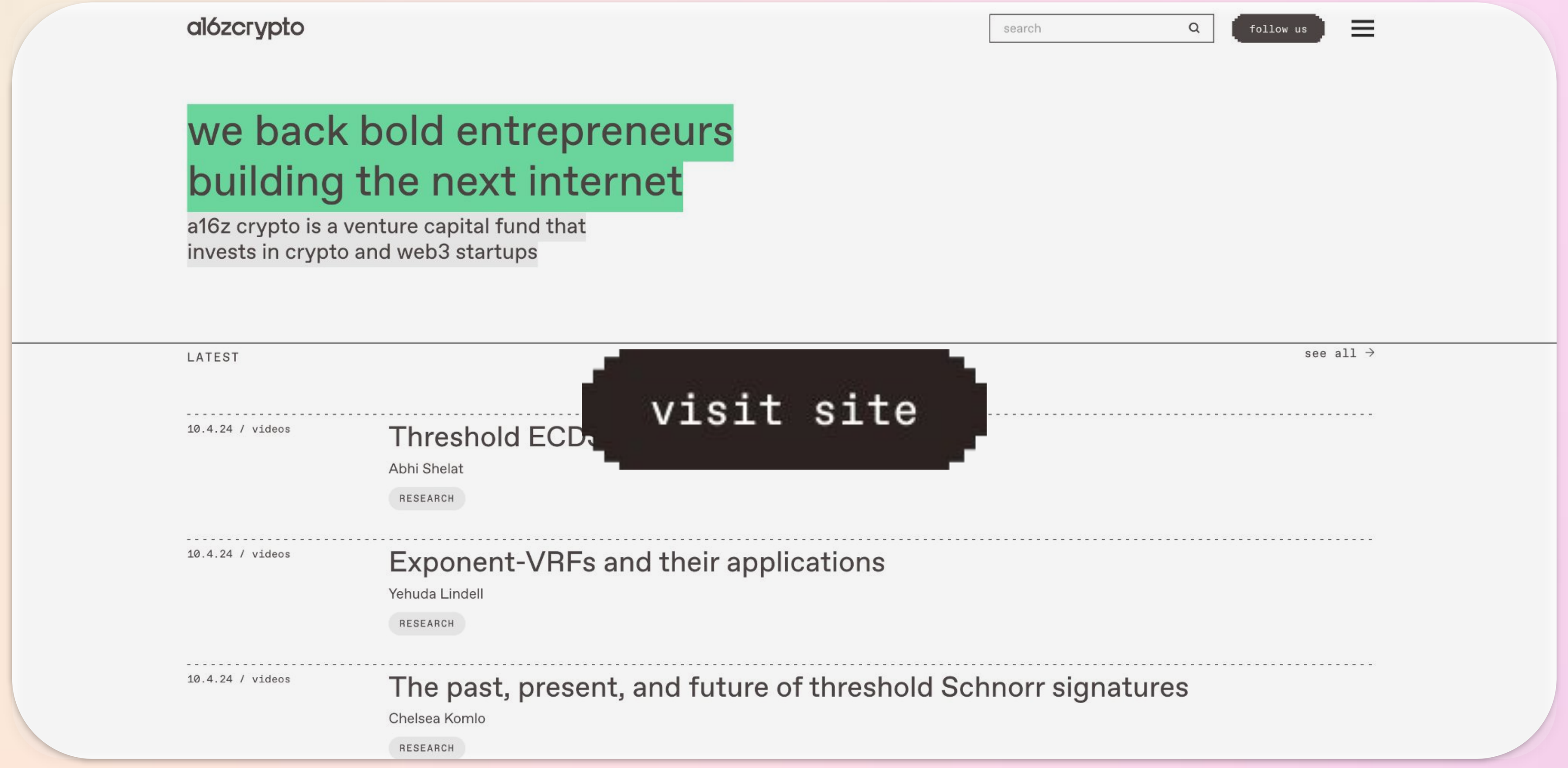


State of Crypto Index

Read Write Own



Blog



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