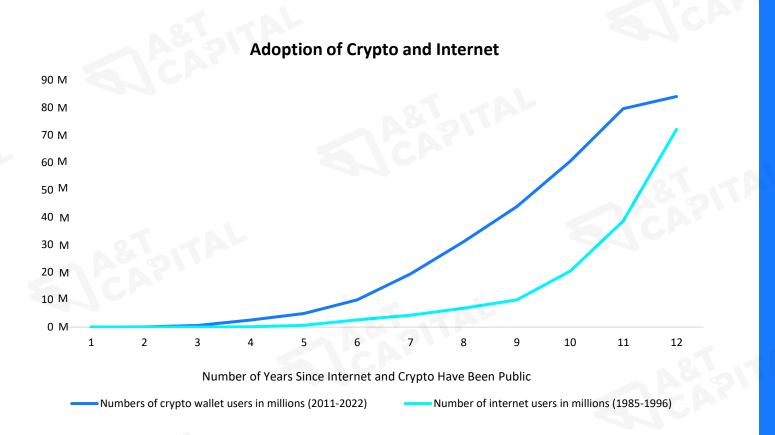


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WEB3 TRENDS 2023



The Number of Web3.0 Users in 2022 Is Slightly Higher Than the Number of Internet Users in 1996



• In 2022, the number of crypto wallet users exceeded 80 million, which is slightly more than the number of internet users in 1996.

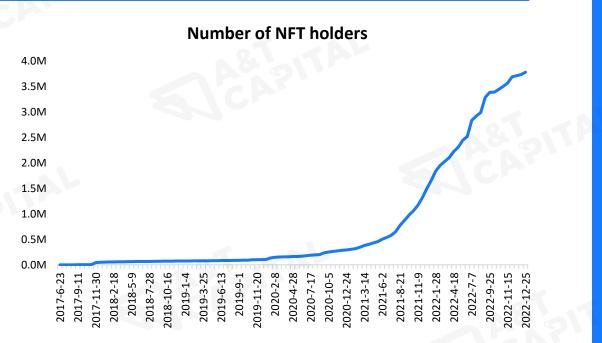


NFT Market Size Exceeds \$20B, Number of NFT

Holders Exceeds 3M



 Even in today's financial market, the NFT market size still exceeds \$21B and has increased by over 300% compared to September 2021.



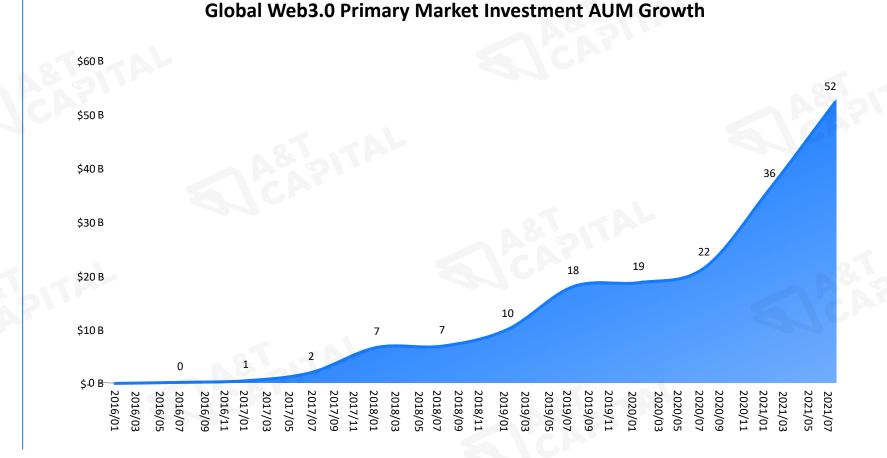
- From 2020 to 2022, the number of NFT holders increased by over 2800%.
- Despite the bearish market, new users continue to collect NFTs, and the number of NFT holders has maintained a strong growth rate.



Web3.0 Primary Market Investment AUM Has Reached \$50B

 In the past 5 years, the rate of increase of primary market funds' total AUM has been

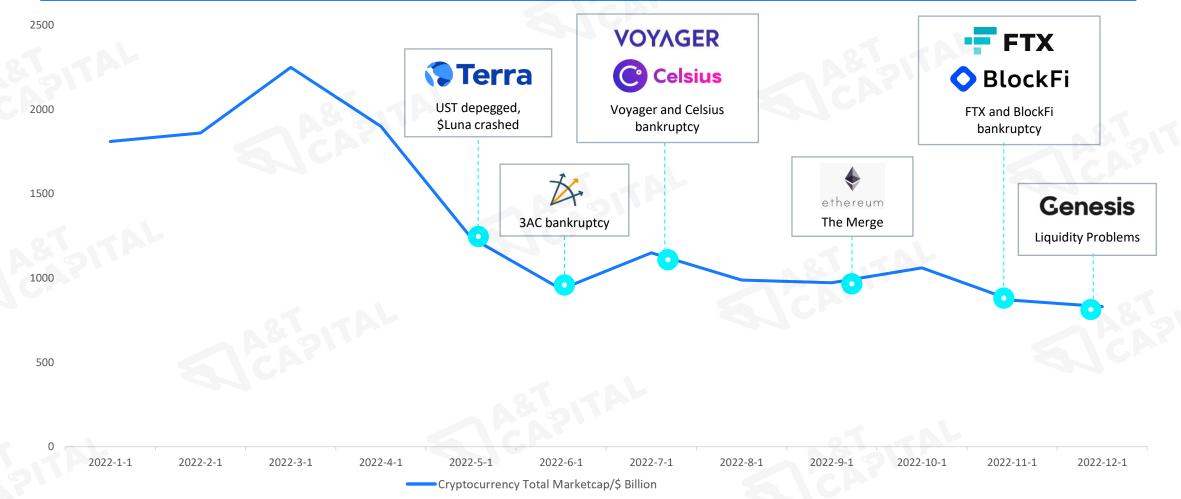
2282%





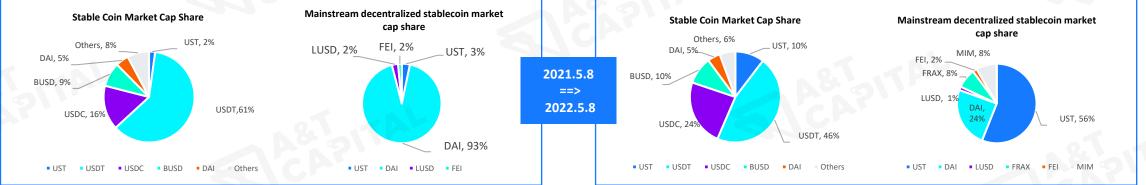
Crypto in 2022:

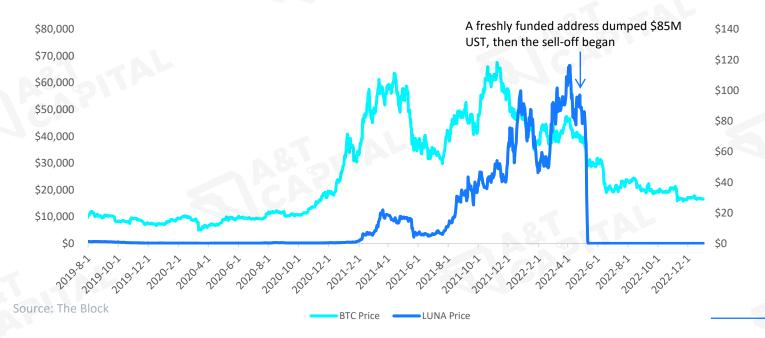
The Good, The Bad, and The Ugly





The LUNA Ecosystem: A Look Back at Its Rise and Fall





- The Bluechip: LUNA was once ranking 5th in total market cap and 2nd only to ETH in terms of market cap of PoS staking assets.
- The Top: UST was once the decentralized stablecoin with the highest market cap, with over \$18 billion, accounting for about 10% of the total market cap of stablecoins.
- All of a Sudden: A coordinated short-selling attack on LUNA, taking advantage of the vulnerability of the "LUNA-UST" anchoring mechanism, caused the collapse of LUNA's market value, losing 99% in just five days.



The Collapse of LUNA: Do Kwon's Foresight and the Failure of LFG's Mission

2021.11.10: Proposals 133 and 134, to burn 88,675 million LUNA (~ \$4.5B), and exchange it for UST via on-chain swap, were passed.

2022.01.20: Luna Foundation Guard was formed to improve the sustainability and stability of UST.

2022.01.27: LFG Reserves reached \$3.5B for the first time.

2022.02.23: LFG completed a \$1B funding round through OTC sale of LUNA Tokens.

2022.05.08: An anonymous address initiated the UST sell-off.

2022.05.09: LFG announced the use of reserve assets to buy USTs in the secondary market with the goal of bringing the UST price back to \$1.

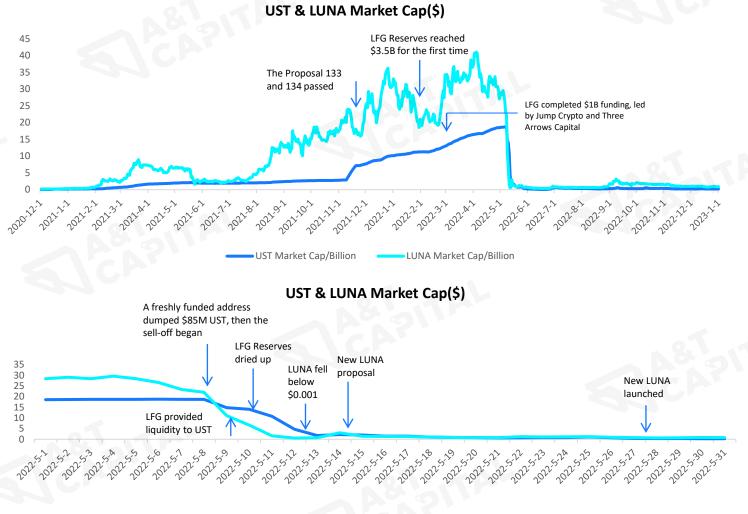
2022.05.10: LFG Reserves were depleted. LUNA's failure became imminent.

2022.05.11: Seeing that it could no longer absorb the UST selling pressure on its own, Do Kwon decided to speed up the process of "burning UST to mint new LUNA" in order to maintain the price of UST through LUNA's liquidity.

2022.05.12: LUNA liquidity was almost depleted as LUNA fell below \$0.001. LUNA failed.

2022.05.14: Do Kwon proposed a hard-fork, rebuild and issue 1 billion new LUNA.

2022.05.27: New LUNA was launched, but it was not as influential as before.





LUNA's Failure Was Inevitable

UST's Peg Stabilization Mechanism:

- If 1 UST > 1 USD, arbitrageurs purchase 1 USD worth of LUNA in the open market, convert the LUNA to 1 UST via the Terra on-chain swap, and sell the 1 UST in the open market for a profit.
- If 1 UST < 1 USD, arbitrageurs purchase 1 UST in the open market, convert 1 UST to LUNA worth 1 USD via the Terra on-chain swap, and sell the converted LUNA in the open market for a profit.

Terra on-chain swap 2. Swap LUNA to 2. Swap 1UST to **1USD LUNA** 1UST **Arbitrageurs** 3. Sell 1UST at a Arbitrageurs 3. Sell LUNA at a profit profit 0. If 1UST > 0. If 1UST < 1USD 1USD 1. Buy in 1USD 1. Buy in 1UST **CEX & DEX** LUNA

The mechanism is not perfect:

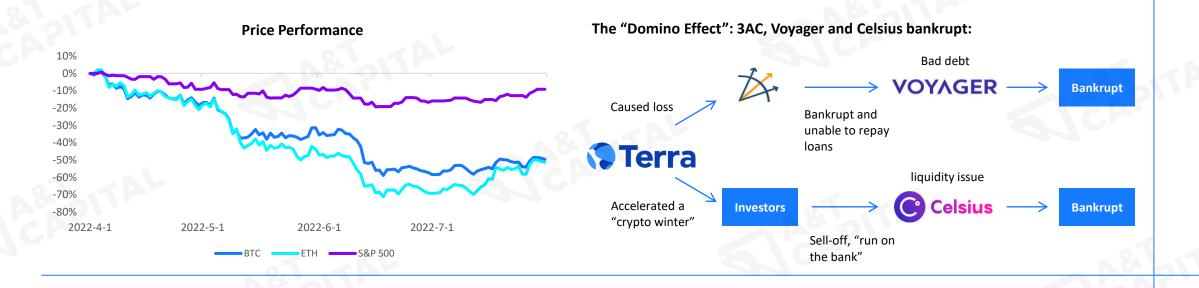
- When the UST price is above \$1, the LUNA price increases, resulting in more capital inflow, leading to an increase in UST supply, and maintaining the stability of the overall ecosystem.
- When the UST price falls below \$1, the opportunity for arbitrage by burning UST to mint new LUNA and selling it leads to a significant increase in LUNA supply.
- The Death Spiral: An increase in LUNA supply leads to a decrease in LUNA price, which results in more LUNA being generated through burning the same amount of UST, leading to a further decrease in LUNA price.



Aftermath: Some Rejoice, Some Fret

The LUNA event triggered a "crypto winter" and industry-wide sell-off:

• Core cryptocurrencies like BTC and ETH saw a significant underperformance compared to the S&P 500 Index following the LUNA event.



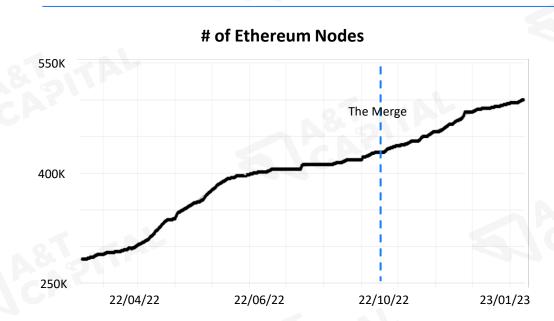
Short sellers and arbitrageurs capitalize on secondary trading:

• Wintermute, as reported by Forbes, profited tens of millions by trading more than \$250 million of UST all the way down to around \$0.10 per token.

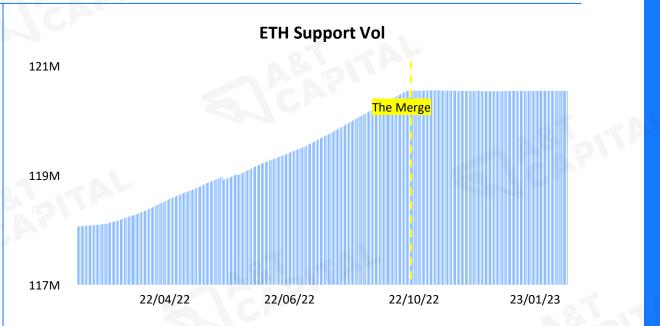




Ethereum Post-Merge: More Robust and Low-Inflation



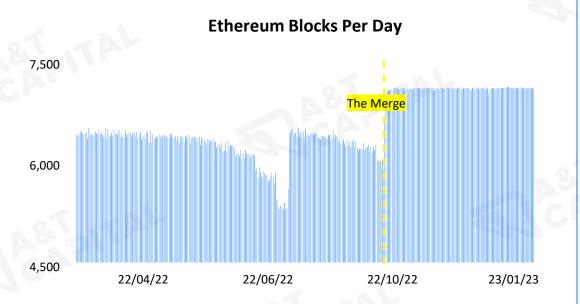
Following the Merge, the Ethereum network saw an influx of 71,655 new validators, greatly enhancing its robustness.



- The inflation rate for ETH has decreased significantly, with an increase of only 1,703 or 0.004%, compared to the previous rate of approximately 5%.
- The decrease in inflation is due to a significant drop in daily ETH issuance from around 14,000 to under 1,700, despite the daily burn rate remaining relatively unchanged since the merge.



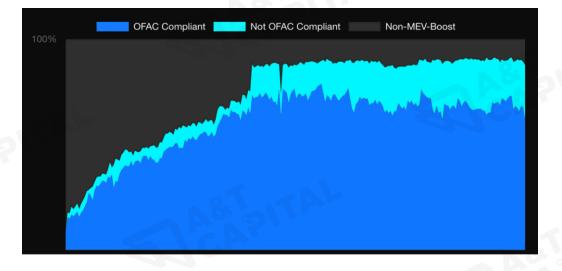
Ethereum Post-Merge: Improved Efficiency and Sustainability, but Censorship Concerns



The daily block rate has increased to approximately 7,150 from the previous rate of around 6,400, while **energy consumption has decreased more than 99%**.

	Ethereum PoW	Ethereum PoS	
Electricity consumptions [MWh/year]	22,900,320	2,600.86	
CO ₂ e emissions [t/year]	11,016,000	869.78	

Post-Merge Daily OFAC Complaint Blocks

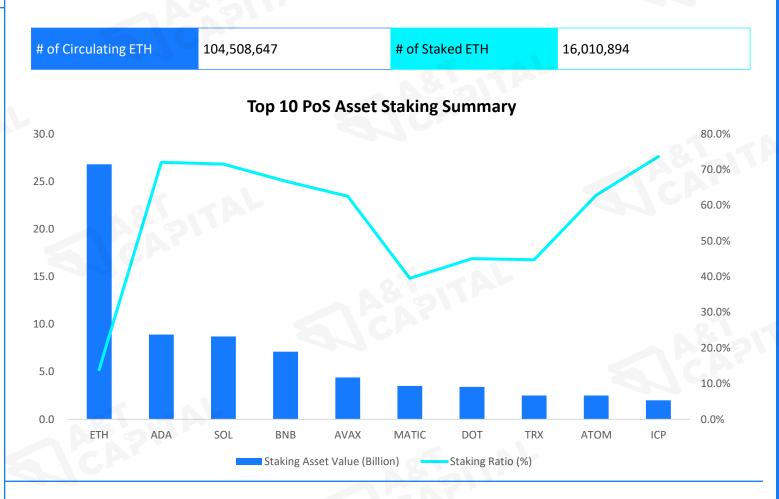


- The percentage of blocked transactions on Ethereum has risen to approximately 65%.
- For a global, permissionless network, the large number of censored transactions (primarily for OFAC compliance) is a significant concern for the future of Ethereum's decentralization and censorship resistance.



Post Shanghai Update, ETH Staking Rate Is Expected to Continue to Rise

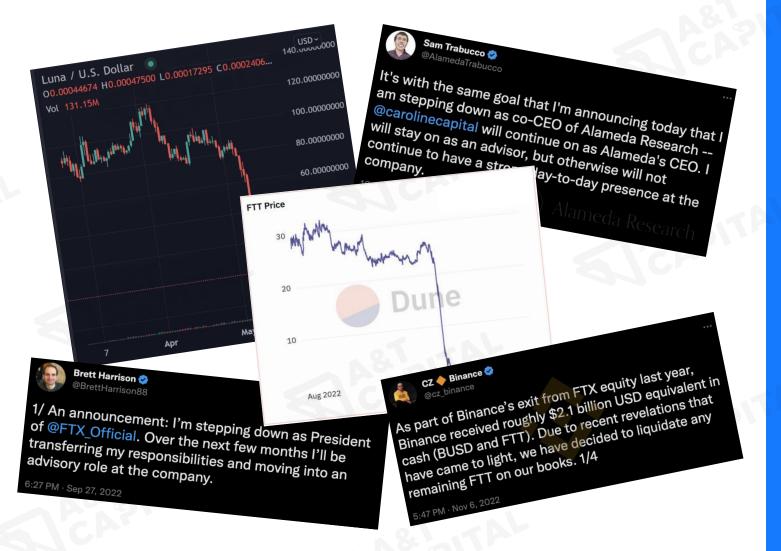
- The Shanghai Upgrade marks the first major network-wide upgrade following the Merge, unlocking the withdrawal function of staked ETH.
- After the upgrade, the circulating supply of ETH will increase in the short-term, but is expected to decrease in the long-term by enabling:
 - Mechanisms that provide returns similar to those of traditional demand deposit accounts
 - ✓ Lower barriers to becoming a validator
 - ✓ Potential additional income from liquidity staking derivatives (LSD)



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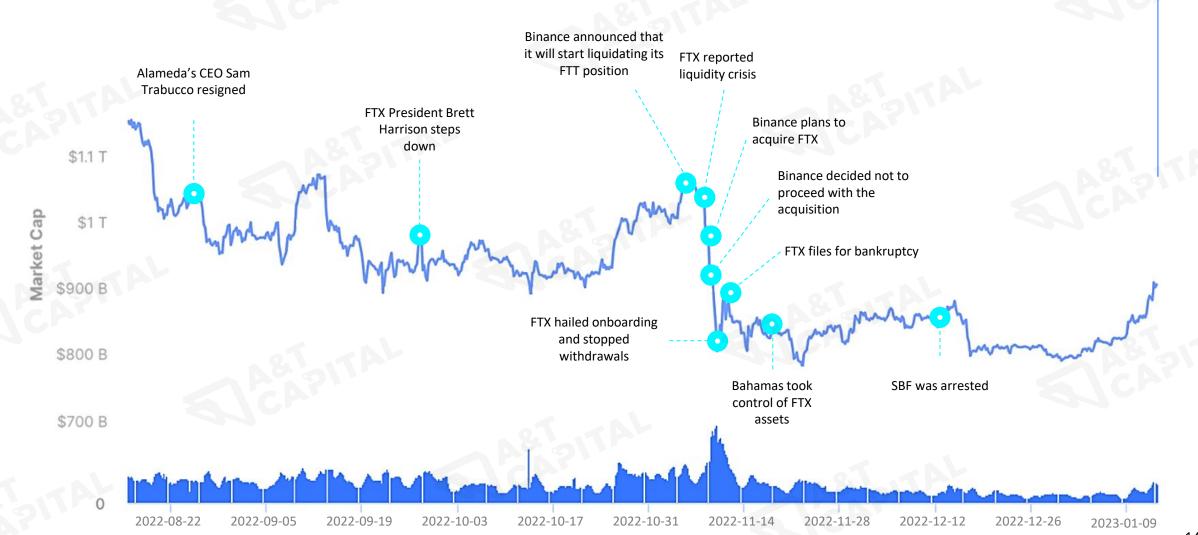
The Decline Of FTX

 In May 2022, Luna Collapsed, FTX
 CEO SBF used this situation to expand aggressively, but internal issues within FTX began to arise.



FTX Timeline





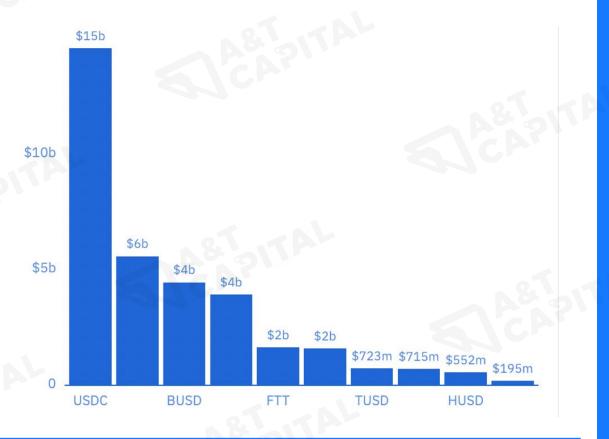
14



FTX Debacle Caused by Misappropriation of Client Funds to Provide Off-Market Loans to Alameda

- FTX generated revenue by processing transactions and offering loans with interest to customers willing to make large bets.
- FTX also had its own token, called FTT, which promised holders access to special treatment on the exchange (e.g lower fees and no-cost withdrawals).
- Alameda, owned by SBF, bought FTT tokens at low prices, waited for its value to increase, and then borrowed "real money" using the highly inflated FTT tokens as collateral.
- FTX used customer funds to give loans to Alameda, which led to a shortage of funds to support withdrawals and pay out customer holdings. The extent of Alameda's holdings of FTT tokens was not publicly known until an internal document was leaked in November.

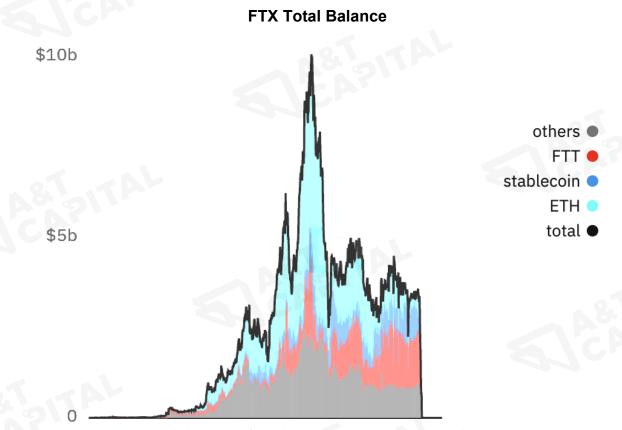
Top 10 Tokens Transferred from FTX to Alameda



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Lessons Learned from FTX's Failure

- FTX's rise and fall serves as a valuable case study for the cryptocurrency industry. It highlights the importance of proper risk management, transparency, and regulatory compliance.
- Additionally, it also shows the risks of using customer funds for internal purposes and the dangers of over-leveraging.
- As the crypto market continues to evolve, it's important for players in the industry to learn from the mistakes of the past and strive for better practices in the future.



Jan 2020 Oct 2020 Jul 2021 Apr 2022 Jan 2023



The FTX Incident and the Market's Decline

- The FTX incident undermined market maker confidence, resulting in a further reduction in liquidity and a rapid decline in trading volumes.
- Cryptocurrency exchange volumes hit a near ٠ two-year low in December 2022 at just \$357.4 billion, a decline of 46.89% from November.
- At the same time, the total market cap has ٠ declined relatively little and the market is gradually entering the bottom range.

3000 2500 **FTX Incident** 2000 1500 1000 500 2021-3-1 2021-11-1 2021-12-1 021-10-1 2022-7-1 2021-9-1 2021-1-2021-2-3 2021-4-2 2021-5-3 2021-6-2 2021-7-: 2021-8-2022-1-: 2022-3-3 2022-4-3 2022-6-3 2022-11-2022-2-2022-5-2022-8-2022-9-022-10-2022-12-Cryptocurrency Exchange Volume Cryptocurrency Total Marketcap

Market cap and exchange volume of cryptocurrency (\$ Billion)



DCG Is Still on the Cusp

According to the open letter:

- Genesis loaned \$2.36B to 3AC.
- 3AC's bankruptcy resulted in a loss of \$1.2B for Genesis.
- DCG entered into a 10-year promissory note with Genesis, which is due in 2032. This note did not improve Genesis' immediate liquidity position.
- Genesis stated in an email to Gemini that the losses were predominantly absorbed by and netted against DCG's balance sheet, leaving Genesis with adequate capitalization to continue business as usual.
- Genesis valued this 10-year note at face value, which is accused as an accounting fraud by Gemini.
- Gemini, acting on behalf of 340,000 Earn users, requested that DCG install a new CEO.

The incident is still ongoing:

- According to the Wall Street Journal, Genesis is preparing to file for Chapter 11 bankruptcy.
- How DCG will be implicated will depend on negotiations with creditors.



Earn Update: An Open Letter to the Board of @DCGco

hole they version. Henr's what happened. We are learning more by the day, but of present, the basic events as as understand from the as to liver. Generals liver 12.24 bitter of another to 34C, a understand from the as a bitter of the second second second second second Generals included that i was the hole of all was 112 bitters. At the point, Barry Sibled into the learning more instructure the denses load took (reside or counted of basic party count) or 18 the \$12 bitters have the

> ose from 3AC would account for roughly 19% of the loan book's assets. A (then could have addressed this shortfall to achive a full recovery of assets for all cluding Gam uses — in a short amount of time and given them direct access to Barry close not to do this. He also chose not to fill the \$1.2 billion hole. Instead, he A.

inning in early July 2022, Bany, DCG, and Genesis embarked on a carefully crafted paigin of leds to make Gemini, Earn users, and other lenders believe that DCG had injecter billion of actual support into Genesis.

blic lies. On July 8th, Michael Moro, then CEO of Genesis, tweeted:

thes, and as a result Genesis ended up owning massive risk. Il 2021, Genesis won this zero-sum trade because the GBTC shares were worth force. Stanlag in 2021, buseder: Genesis bat this trade because the shares were

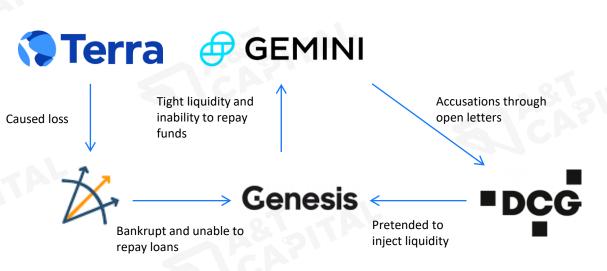
as dual in the share we have the Gan the source production to the the web because and dual in the share of the source the Gan the source production to the the web because every share you could be an interval that products in the Gan the Gan the participation of the Gan the Gan the Gan the source share been a zero sum take into a fixed source that the Gan the Gan the source share been a zero sum take into a fixed source share the source source source source source source the the fixed source source source source source source source source the source source source source source source the source source source source source the source source source source source source source source the source source source the source source source the source source source the so

d to 3AC on attractive terms and accept GBTC as collaters. For Grayscale, this had the side diffect of leaging GBTC shares from heiring solid into the market, which would have presed the share price and further widenred the discount to NAV. But for Genesis, this had underwide effect of keeping its risk position open and allowing it to grow. If would be accepted to the batt of the set of the

money? Things only begin to make sense when you realize that the bitcoin this seay was stuffing into the Grayacale That like a Thanhagking turkey is studi there forwer. It can never elemented (or at least and Grayacale, in its also discretion, decides to implement a midempilo magram allowing GBTC shares to be converted back into bitcoin). As a result, Barry was confortable with Graenis loading up more and more on this load table course it was a gain to the state. It was a state of the state of the state of the state of the state it was a set of the state. It was a state of the state. It was not result in the state of the state

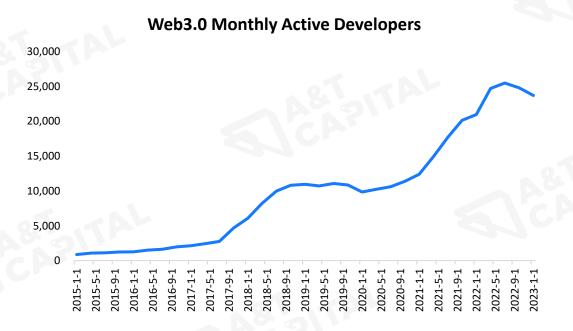
9:40 PM · Jan 10, 2023 · 3.8M Views

1,354 Retweets 834 Quote Tweets 5,336 Likes

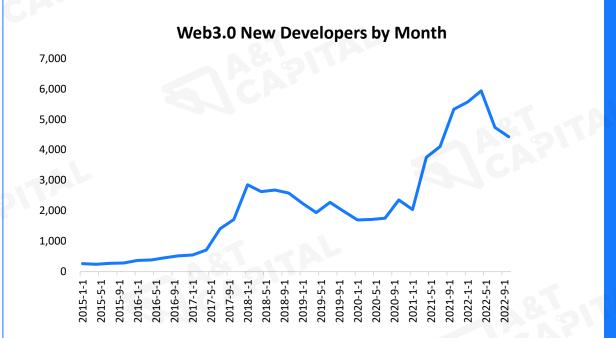




The Market Is Shaking, but The Influx of Innovation Doesn't Stop



• From 2020 to 2022, the number of monthly active Web 3.0 developers increased by over 240%.

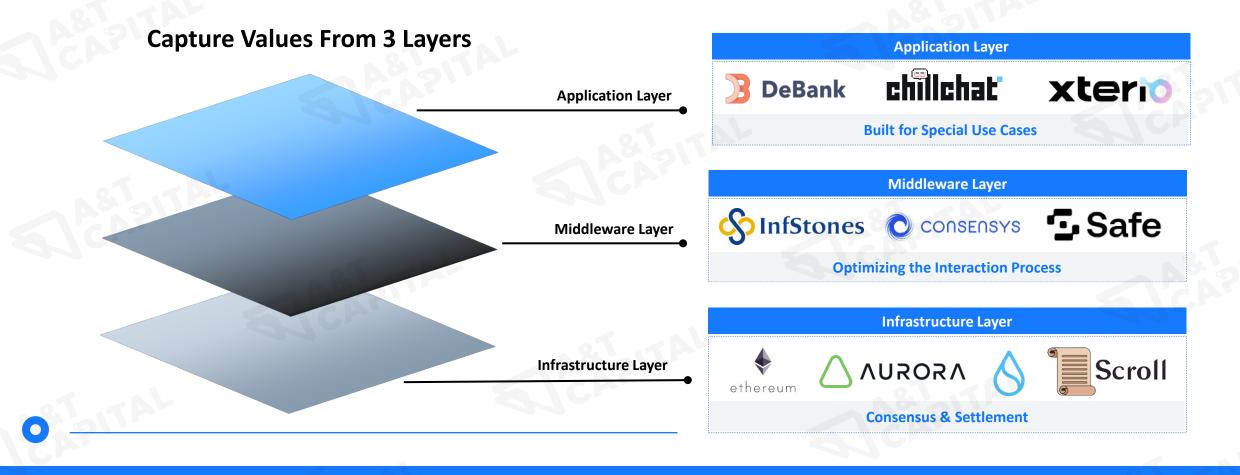


 From 2020 to 2022, the average annual compound growth rate of the number of new Web 3.0 developers per month is over 40%.



Web 3.0: Revolutionizing Internet Infrastructure

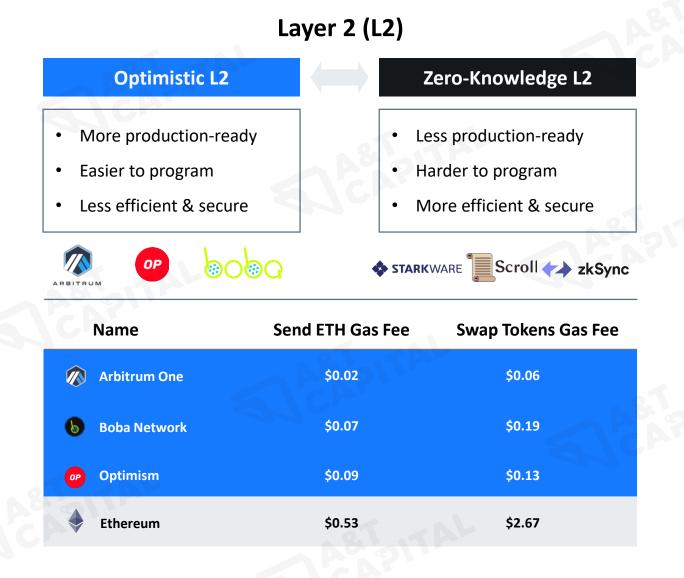
• Web3.0 technology stack clarifies data ownership by providing an infrastructure for its secure and cross-border flow, leading to a new paradigm and the creation of novel products that were not present in Web 2.0.





Layer2 Is Necessary for Ethereum to Support Massive Adoption

 Through the execution of transactions off-chain, Layer2 (also known as Rollup) can handle **100x** more capacity at a much lower cost while still inheriting the security of the Ethereum network.





ZK Layer2 Is the Long-Term Plan for Ethereum Scaling Solution

- There are several different ZK Layer2s in the current market, and each of them makes its own tradeoffs between practicality and speed.
- All of them will continue to co-exist for diverse needs, and the market will benefit from code redundancy.

Compatibility

TAIKO

100% Ethereum Layer1 developement enviroment Proof generation takes a significant amount of time (hours)



 Highly compatible with most Ethereum Layer1 development environment
 Proof generation takes a significant amount of time (approximately 1 hour)

zkSync

 Minor modifications are required to adapt to Ethereum Layer1 development environment
 Proof generation time is faster (minutes)

 Compatible only with Solidity-based Ethereum Layer1 development environments

Fastest proof generation time (seconds)





ZK Layer2s Are Thriving and Growing Quickly

- Solutions that are designed for a specific function are easier to develop and progress at a faster pace.
- On the other hand, universal solutions that aim to cater to multiple needs are more challenging to develop and progress at a slower pace (anticipated to be available by 2023).
- ⁶ The valuation in italics represents the primary market value, while the others represent the secondary market value.
- * Both zkSync and zkSync 2.0 have a single value, and Aztec and Aztec Connect also have a single value.

Name	Purpose	Valuation*	TVL	Status	
★ zkSync	Token Transfer	\$2.2B*	\$54.9M	Main Net Main Net	
dYdX	Exchange	\$1.1B	\$388.2M		
Aztec	Private Transfer	\$1.5B*	\$2.3M	Main Net	
MinimutableX	NFT, Exchange	\$763M	\$69.1M	Main Net	
	Exchange	\$260M	\$81.5M	Main Net	
STARKNET	Universal	\$8.0B	\$5.1M	Test Net	
ZkSync 2.0	Universal	\$2.2B*	N/A	Test Net	
Scroll	Universal	\$1.8B	N/A	Test Net	
Aztec Connect	Private Defi	\$1.5B*	\$9.2M	Test Net	
🜐 polygon Hermez	Token Transfer	N/A	\$283.1K	Test Net	

Source: Coingecko, L2beat

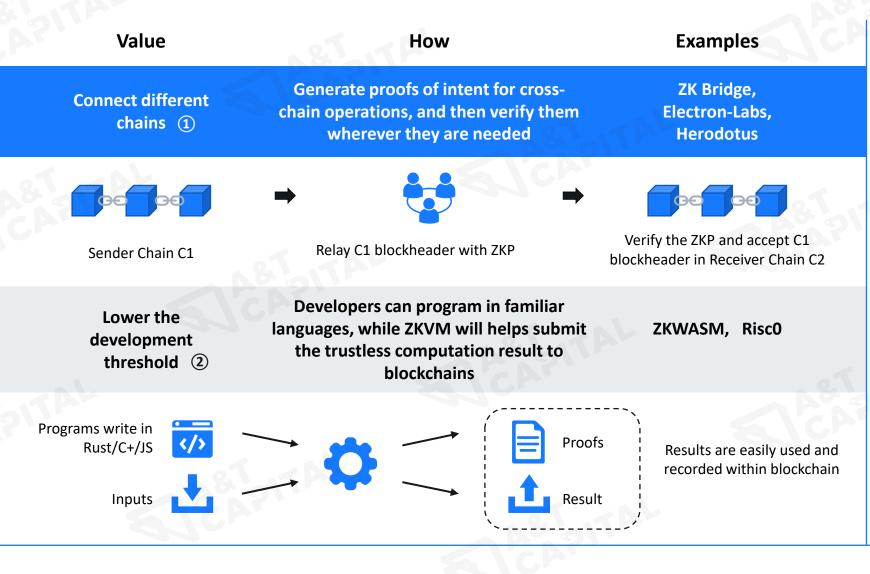


ZKP: A Technology with Endless Possibilities

 Zero-Knowledge Proof (ZKP) uses mathematics and cryptography to enable the proof that a computation was performed correctly, without revealing any additional information about the computation.

> Reference Reading ①: https://arxiv.org/abs/2210.00264

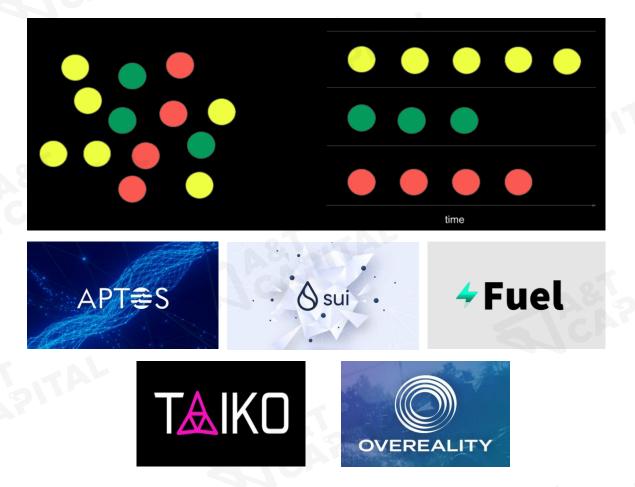
Reference Reading ②: https://delphinuslab.com/zk-wasm/





Parallel Computing Has the Best Performance for Maximizing Blockchain Computation

 Parallel computing is a very common solution in traditional high-performance computing scenarios, and several new projects have cleared the barriers for blockchain parallel computing deployment. Transactions that touch non-overlapping contracts can be computed in parallel





Modular Design Has Become the Most Popular Thesis for Releasing the Potential of Blockchain

• Modular Design Thesis: Maximizing Efficiency by Allowing Each Unit to Perform Simple Operations.





dApp

Application-Specific

Application-Specific Blockchain: Market-Driven Adoption

- The increasing interest in blockchain technology across various industries, such as finance, gaming, and social media, is putting pressure on the underlying infrastructure.
- An application-specific blockchain is a good fit for these industries due to its:
 - ✓ High Performance
 - Customizability \checkmark
 - Value Capture Potential \checkmark

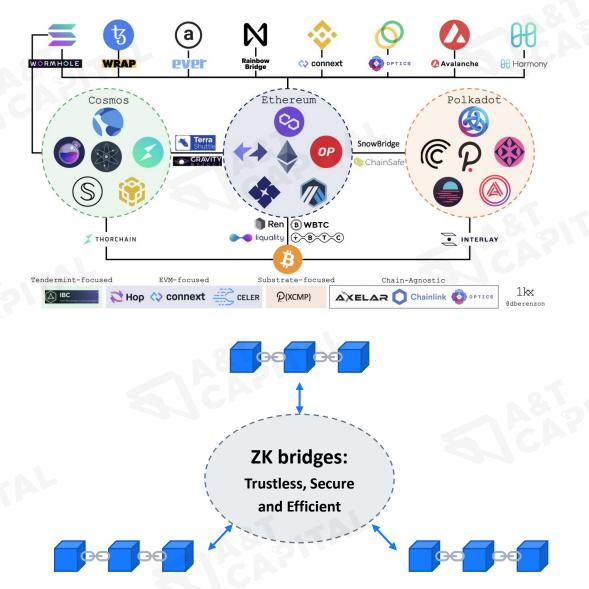
dApp Blockchain Layer3 dApp dApp Layer2 dApp dApp dApp dApp dApp Layer1 dApp dApp dApp dApp dApp Constellation Development Starkware Layer3 % dymension CØSMOS Framework zkSync Layer3 **Examples** Stackr **App-Specific** dYdX RIBBON Blockchain Looking for pioneers Examples

1 Layer3 is a new layer of network built on Layer2 Visuals inspired by: 1kxnetwork



More Secure and Efficient Interoperability between Blockchains

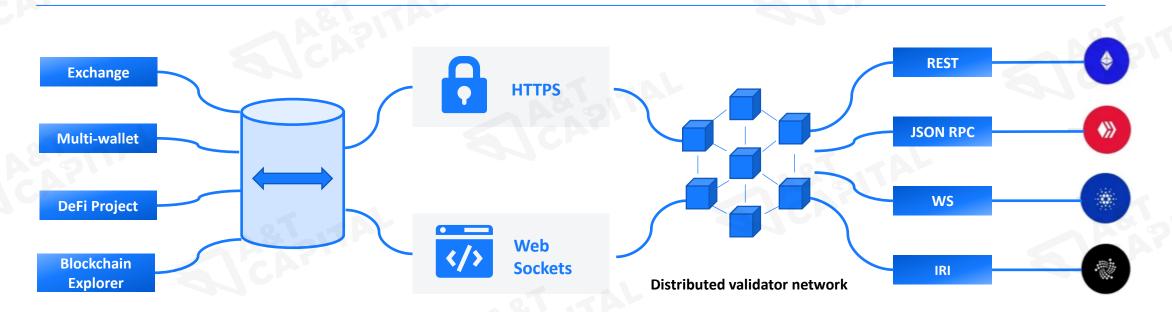
- Currently, the industry has a range of bridges that can connect isolated blockchains, but these solutions often lack efficiency and security.
- Zero-Knowledge (ZK) bridges have the potential to revolutionize this process if they are implemented effectively.





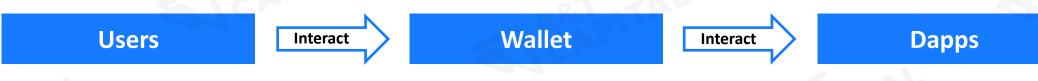
Simplifying Blockchain Interaction through Node Layer and Decentralization with DVT

The Decentralized Node Service, powered by Distributed Validator Technology, directly interacts with various
decentralized networks (across different blockchain networks) and enables the reading, writing, and
broadcasting of data across these networks.



Decentralized node layer, including Staking-as-a-Service and Node-as-a-Service built on distributed validator network

As the Entrance of Web3.0, Wallets Today Face Two SCAPITAL Problems: Not Secure & Poor UX



The Entrance of users

Mnemonic Wallet's Secret Recovery Phase



Please select each phase to make sure it is correct.

Mnemonic Wallet's Two Problems and Their Impact

High Security Threshold: Damages Existing Web3.0 Users

- Easy to be hacked: \$3.4 billion was hacked in 2022.
- Easy to lose mnemonic phrase: 3.7 million bitcoins were lost forever.

Poor UX: Blocks Web3.0 Newcomers

- Difficult to understand and memorize the mnemonic phase.
- Unfamiliar registration/login process different from Web2.0.
- Hard to help Web3.0 new users experience Web3.0 Dapp without gas token.

New AA and EOA Wallets Are Rising, in Order to Achieve WEB2.0-Level Security and UX

Account Abstraction Can realize complex logic on-chain Safe * On-chain social recovery * Gas payment by the third party argent Censorship-resistant Can be built modularly Does not support multichain Soul Wallet X High gas fee Web2.0-level security and UX The future of Support multichain **coinbase** Wallet wallets Low gas fee Easy to implement web3auth X Cannot realize complex logic on-chain X Hard to be censorship-ZenGo resistant

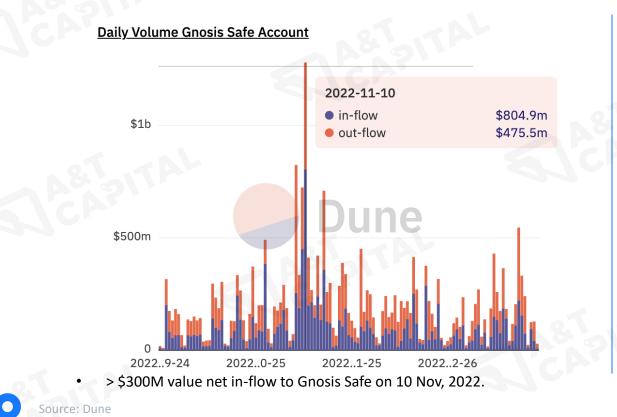
Externally Owned Accounts

A&1

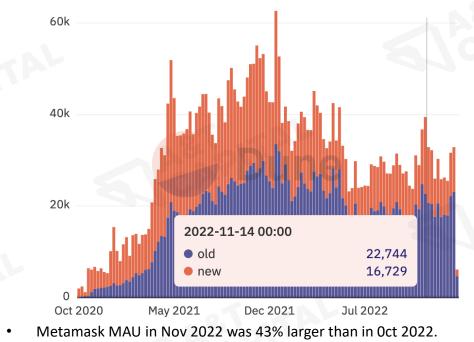
Non-custodial Wallet: Your Private Key, Your Assets



 When the FTX crisis began brewing in November 2022, many people transfered their assets to non-custodial wallets such as Gnosis Safe for institutional users and Metamask for individual users, as these wallets offer real controlling for personal assets than even the largest centralized exchanges.







32

Trends in Exchange: Transparency and Decentralization

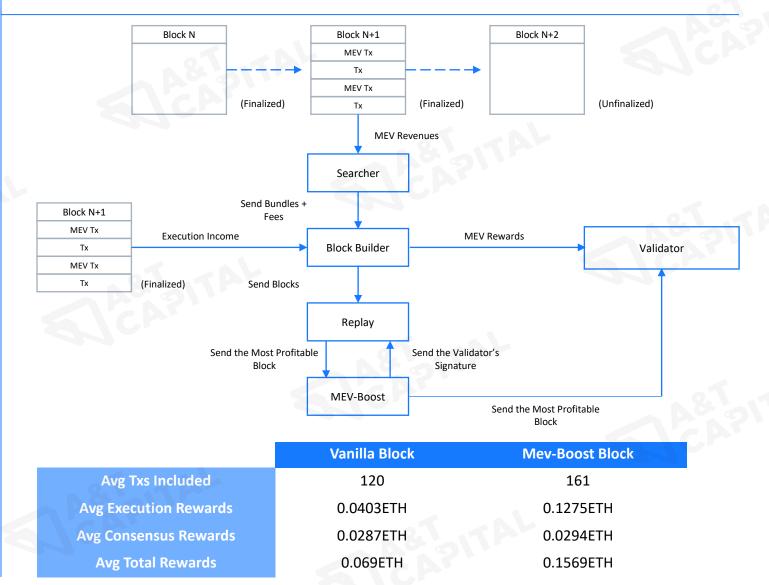
Exchanges are increasingly publishing Proof of Reserves to demonstrate their transparency, and this trend is
expected to continue in 2023. Hybrid exchanges with centralized orderbook, decentralized custody and
clearing may grab a higher market share.

	FTX	Uniswap	dYdX	GMX	Opensea	Hybrid Exchange	
Where assets are held? (Custody)	Exchange's Wallet	Smart Contact	Smart Contact	Smart Contact	Users' Wallet	Smart Contact	
Who provide pre-confirmation? (Clearing)			StarkEx	Layer2		Layer2	
0					Layer1		
Who provide finality? (Settlement)	Centralized Serve	Layer1	Layer1	Layer1		Layer1	
Where oders are matched? (Trade)			Centralized Serve	Layer2	Centralized Serve	Centralized Serve	



The Growing Importance of the MEV Market

- Access to the MEV market can significantly boost Validator revenues. The average value of MEV-Boost Blocks is more than three times that of Vanilla Blocks as of December 31, 2022.
- Block Builder has paid over 70,000 ETH to Validator within three months of Ethereum Merge, and the MEV total is expected to continue increasing.





Appendix — — About A&T Capital

The fund identifies and invests in the explosive growth of early emerging blockchain technology and applications by closely monitoring the development of Web3.0, the technical building blocks, and the underlying technology platform with a data-driven research approach.

A&T Capital Provides Abundant Industrial Resources and Community Support

Professional Industry Insights & Extraordinary Talent Pool

Our portfolio projects will benefit from our professional industry insights, deep understanding of the local market, and extensive resources and insights in multiple areas, as well as access to a global talent pool backed by 5 decacorn companies.

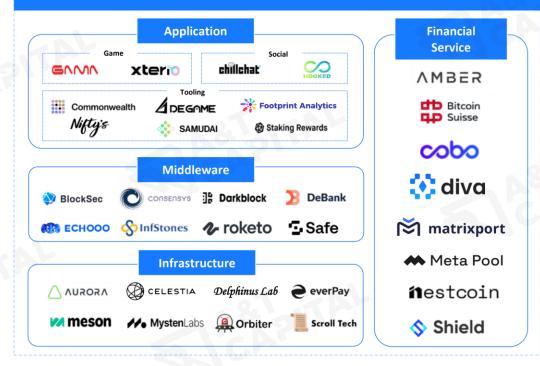
Diversified Resources

We add value to projects through commercialization opportunities and high-quality cooperative channels, and we assist overseas portfolio companies in establishing an Asia strategy with our connections to top-tier investment institutions, exchanges and brokers, and media channels.

Product Council

A&T Capital has a network of business advisors and technical experts who assist portfolio companies in all aspects of development and a product council of experienced product owners to help portfolios build more user-friendly and accessible real-world applications.

A&T Capital's Portfolios





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