

Market Review

**NOV
2021**

Genesis

NOVEMBER 2021 MONTHLY REVIEW

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Introduction

November 2021 will be remembered as a pivotal month for so many aspects of the crypto market.

- BTC and ETH and many other tokens reached all-time highs, and the total crypto market cap pushed through \$3 trillion for the first time.
- The market rotation into smaller-cap tokens gathered momentum.
- We saw mayors of key US cities commit to accepting at least part of their salaries in BTC.
- El Salvador is issuing the world's first blockchain bond linked to BTC.
- Taproot – the most meaningful upgrade to Bitcoin's code since SegWit's block capacity increase in 2017 – activated, bringing more flexibility for developers and more privacy and in theory lower costs for users.
- BTC whiplashed between acting like an inflation hedge and acting like a risk-on asset, with the latter predominating for now.
- Ethereum layer-2 scaling solutions grew in size, with new options entering the scene.
- Alternative layer-1 development seemed to accelerate, with events, developer interest and funding pouring in.
- NFT creativity kicked up to a new level, as artists, celebrities, brands and users met and issued and tinkered with new functionalities
- Mainstream interest in the metaverse burst onto the scene, boosting activity on decentralized metaverse platforms along with the prices of their tokens.

These are just some of the many fascinating topics that emerged in November that collectively point to an acceleration of interest from investors, developers, entrepreneurs, regulators and users. We go into more detail on some of these below.

In our Genesis monthly reviews, we will try to pick out the most interesting developments and trends that we believe are shaping the markets going forward. We will look at market movements, political developments, on-chain data, narratives and innovation trends, as well as share insight on some deeper trends.

In just a few pages we will be unable to cover everything that deserves a closer look, but we hope to convey some key themes to keep an eye on.

(Note: we use uppercase Bitcoin to denote the network, and lowercase bitcoin or BTC to denote the asset; for Ethereum, we use uppercase to denote the network, and ether or ETH to denote the asset.)

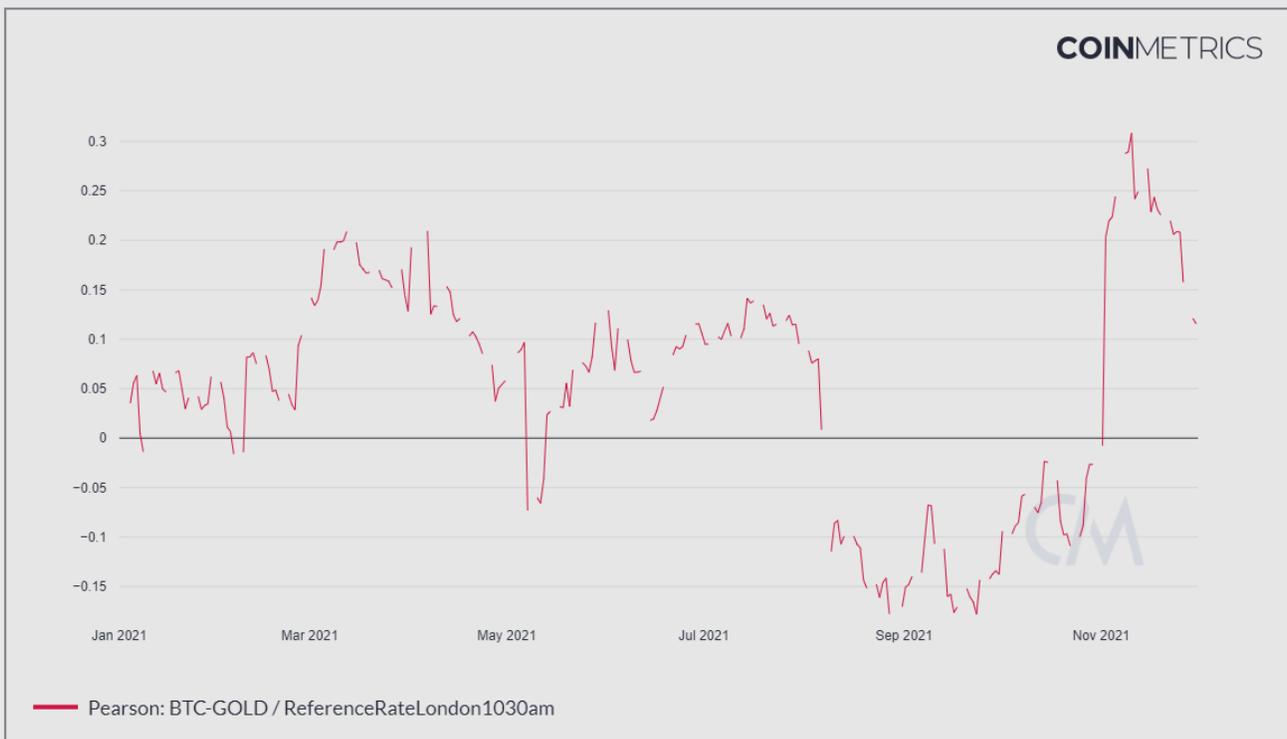
Is Bitcoin an Inflation Hedge?

As inflation indicators continued to head upwards around the world, economists and analysts reassessed economic growth and interest rate predictions. Early in the month US Federal Reserve Chairman Jerome Powell announced the beginning of the long-expected tapering of US government bond purchases and hinted at interest rate increases to come early in 2022.

The US CPI headline surprise in mid-November – 6.2% year-on-year vs 5.9% expected, the highest rate since 1990 – caused a volatile reassessment as well

as some volatile swings in BTC which shot up on inflation fears and then came plummeting down as the market assessed a possible acceleration of interest rate increases which would impact risk-on assets. This understandably rekindled the debate on whether BTC was or was not an inflation hedge.

If bitcoin is “digital gold”, and gold is an inflation hedge, then it follows that bitcoin is too, right? Unfortunately, there is no evidence to back this up, and even the relationship between inflation and gold has been tenuous over the years. Longer term, however, gold has more than held its value



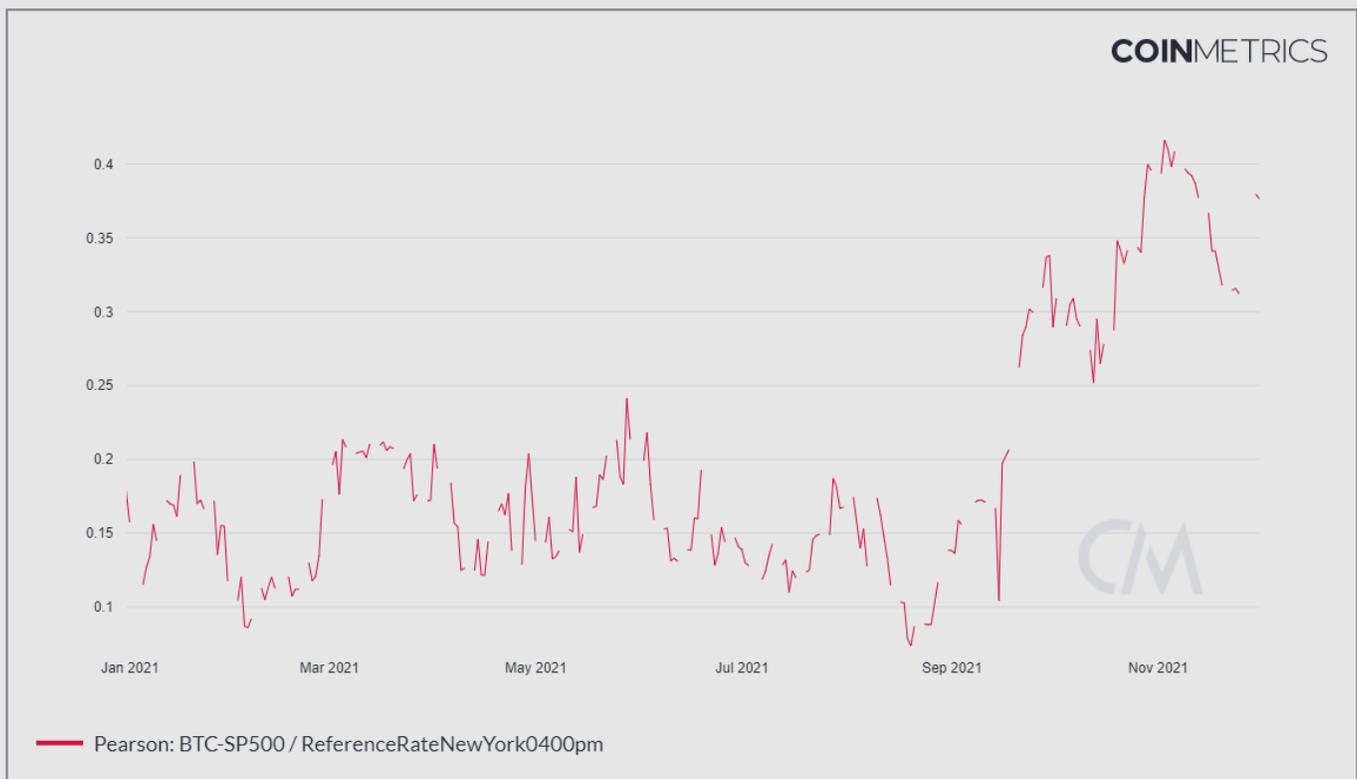
(chart via [Coin Metrics](#))

while fiat currencies have declined; bitcoin could end up doing the same.

As if to make that point, the 60d correlation between BTC and gold, which had been negative since mid-summer, shot into positive territory at the beginning of November. This was largely due to gold finally starting to react to inflation numbers that seem less and less “transitory”.

So, is BTC a risk-on asset like tech stocks? In early November, its correlation with the S&P 500 hit its highest point since November 2020, although it has retraced since then in spite of the generalized market slump over Thanksgiving weekend.

The expected intensification of inflation concerns is likely to concentrate even more investor attention on BTC in the coming months as bitcoin gradually moves towards that role, but the short-term emphasis could end up being on the overall market risk of interest rate increases. Meanwhile, the uncertainty around the evolution of the pandemic and the renewed threat to economies and supply chains of rolling lockdowns in parts of the world, could exacerbate overall market jitters.



(chart via [Coin Metrics](#))

Funding Gets Louder

In Q1, a staccato of headlines proclaimed, “the institutions are here”, with news of traditional financial institutions either publicly committing to setting up crypto operations for their institutional clients, or investing in companies that catered to the institutional market.

November, on the other hand, will be remembered for the launch of some significant general funds, including:

- a \$2.5 billion fund from Paradigm¹ (the largest crypto fund to date)
- a \$1.5 billion fund from former Citigroup executive Matt Zhang²
- and a \$600 million fund from Pantera Capital³.

Even more notable is the flood of funds focusing on specific blockchain categories and applications, marking a growing specialization in institutional focus, such as:

- A \$220 million ecosystem fund for Avalanche⁴
- A \$160 million ecosystem fund for privacy-focused layer-1 Oasis⁵

- A \$100 million ecosystem fund for Ethereum layer-2 Metis⁶
- A \$100 million Efinity Metaverse Fund floated by Enjin to boost the NFT marketplace⁷
- A \$100 million investment commitment from Reddit founder Alexis Ohanian’s fund 776 into social media applications on Solana⁸
- A \$100 million fund from Sfermion for investments in the metaverse⁹
- A \$100 million fund from the Tron Foundation and APENFT for NFT projects¹⁰
- A \$100 million fund from Solana Ventures, FTX and Lightspeed for blockchain gaming investments¹¹

(We return to some of these in later sections.)

1 - <https://www.theblockcrypto.com/linked/124327/paradigm-launches-2-5-billion-venture-fund-for-crypto-companies>

2 - <https://www.theblockcrypto.com/linked/125664/former-wall-street-banker-launches-1-5-billion-crypto-venture-fund>

3 - <https://www.coindesk.com/business/2021/11/23/pantera-capital-raises-600m-for-new-crypto-fund-report/>

4 - <https://www.theblockcrypto.com/linked/122729/avalanche-launches-fresh-200-million-incentive-fund>

5 - <https://www.coindesk.com/tech/2021/11/17/oasis-launches-160m-ecosystem-fund-with-backing-from-jump-capital-and-others/>

6 - <https://thedefiant.io/metis-latest-optimistic-rollup/>

7 - <https://www.theblockcrypto.com/post/123271/enjin-floats-100m-efinity-metaverse-fund-to-boost-nft-marketplace>

8 - <https://www.theblockcrypto.com/post/123763/reddit-co-founder-to-invest-50-million-in-social-media-on-solana>

9 - <https://www.theblockcrypto.com/linked/122856/firm-backed-by-alan-howard-winklevoss-twins-closes-100-million-metaverse-fund>

10 - <https://www.coindesk.com/business/2021/11/03/tron-foundation-apenft-launch-100m-fund-for-nft-projects/>

11 - <https://www.theblockcrypto.com/linked/123397/solana-ventures-ftx-lightspeed-100-million-blockchain-gaming-fund>

While bitcoin had a weak November, with a decline of 6.5% over the month, the tailwinds continued to accumulate.



(chart via [Messari](#))

In November, we saw:

- Mayors of key US cities commit to take at least part of their salary in BTC
- El Salvador announced the creation of Bitcoin City, and the issuance of the first bitcoin-based bond
- The activation of the Taproot upgrade
- MicroStrategy added even more BTC to its balance sheet

Taproot Could Broaden Use Cases

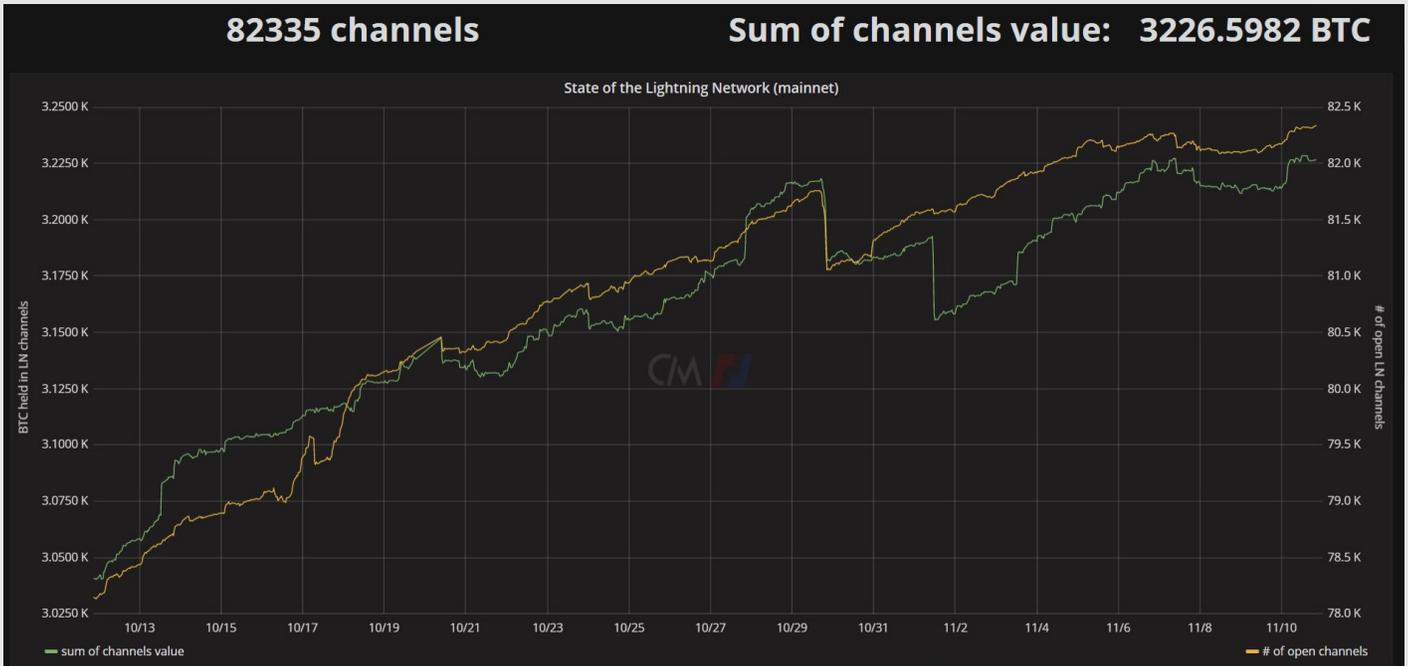
The Taproot upgrade, the most significant update to the Bitcoin network since the SegWit block capacity increase in 2017, activated on November 12 at block height 709,632. Among the changes implemented

are:

- enhanced smart contract functionality, potentially broadening bitcoin's use cases;
- increased privacy, by obscuring the type of transaction executed;
- Schnorr signatures will make Bitcoin transactions more data-efficient, which should lead to lower transaction fees;
- they will also make transactions on the Lightning Network cheaper, more flexible and more private, which should further boost Bitcoin adoption.

Perhaps more importantly, Taproot is a reminder that Bitcoin is a new technology that, while stable, will continue to improve over the years. This change will always be slow, given the need for consensus. But when last did someone successfully propose an upgrade to gold?

The Lightning network – a layer-2 solution that enables faster and more scalable transactions that periodically anchor to the Bitcoin blockchain, dramatically enhancing throughput at low fees while still benefiting from Bitcoin's security – continued to expand rapidly, reaching all-time highs in both the number of open channels and the amount of BTC locked in these channels.



(chart via txstats.com)

This growth reminds investors that bitcoin is a complex asset and that its potential use as a payment rail should not yet be ruled out. This use could end up supporting rather than competing with bitcoin's role as a store of value asset, giving it a greater economic utility which could further boost long-term demand.

While many are skeptical as to the network's practicality as a base for decentralized finance (DeFi) applications, progress is being made on this front as teams attract financing and move forward with development:

- Portal, which is building a DeFi ecosystem on Bitcoin, announced a partnership with Polygon to expand functionality through BTC swaps¹².

12 - <https://cointelegraph.com/news/portal-partner-with-polygon-to-advance-defi-on-bitcoin>

- Alex, a startup developing fixed-rate and fixed-term BTC lending and borrowing on Bitcoin, raised \$58 million in funding¹³.
- And TBD, the division set up by Jack Dorsey's Square to develop DeFi on Bitcoin, revealed details¹⁴ of a compliant decentralized exchange that would allow financial institutions to facilitate swaps directly between bitcoin, fiat and other cryptocurrencies, respecting KYC regulations while allowing users control over their identity information.

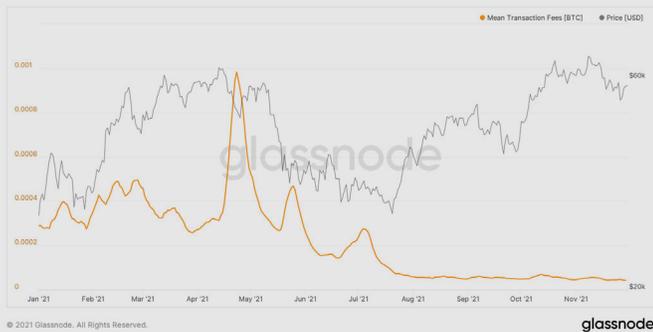
13 - <https://www.coindesk.com/business/2021/11/15/alex-raises-58m-to-bring-defi-to-the-bitcoin-ecosystem/>

14 - <https://www.theblockcrypto.com/linkedin/124945/square-decentralized-exchange-protocol-white-paper>

On-chain Data Shows Declining Available Supply

Blockspace demand on the Bitcoin network trailed off towards the end of the month, as reflected by declining BTC transaction fees. This may be in part due to the growth in Lightning use highlighted above.

Bitcoin: Mean Transaction Fees (7d Moving Average)



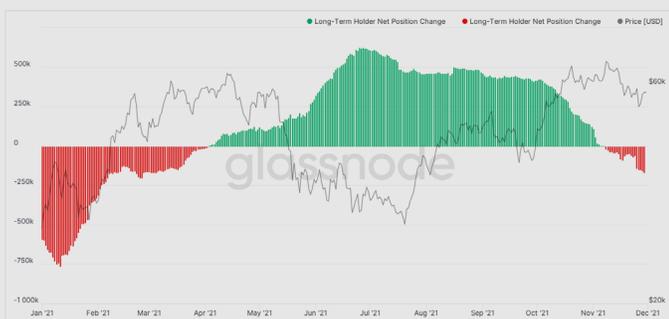
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glassnode

(chart via [glassnode](#))

One notable shift this month was the net change in long-term holder (LTH) positions (defined as the amount of BTC held for more than 155 days) – it turned negative for the first time since October 2020, indicating that LTHs are starting to sell into strength. This is not necessarily a bearish sign – LTHs (a proxy for the industry’s “smart money”) tend to accumulate into weakness and sell into strength. The last time the metric turned negative, BTC continued to rally a further 380%.

Bitcoin: Long-Term Holder Net Position Change



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(chart via [glassnode](#))

This shift has not yet started to feed through to the amount of BTC considered “illiquid” (held in addresses that spend less than 25% of incoming coins). This metric has continued to head up and to the right, with over 75% of circulating BTC now held in “illiquid” accounts. This sets the stage for a strong move when sentiment turns.

Bitcoin: Illiquid Supply



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(chart via [glassnode](#))

BTC Derivatives and Declining Leverage

BTC perpetual futures funding rates ended the month muted compared to where they started, as investor enthusiasm in the ETF listing aftermath waned.

Bitcoin: Futures Perpetual Funding Rate - All Exchanges



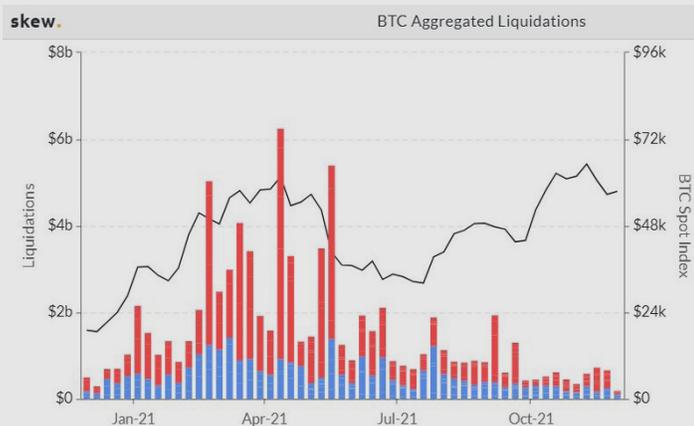
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(chart via [glassnode](#))

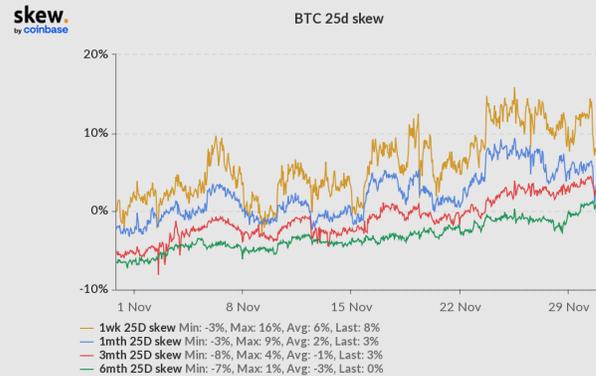
The open interest on both bitcoin futures and options declined slightly from the high levels established in October, but remained notably higher than September levels. Liquidations remained relatively muted compared to the first half of the year, a sign that leverage levels are nowhere near their H1 highs.

decrease in sync. An increase in this metric towards the end of the month, however, hints at leverage creeping back into the market.



(chart via [skew analytics](#))

This is further borne out by relatively low levels of crypto-margined positions vs USD-margined positions, which points to more muted swings – crypto-margined positions are generally offered on high-leverage exchanges and leave holders doubly vulnerable to downturns as both the value of the contract and the collateral



(chart via [skew analytics](#))

The market for BTC options in November started signaling a shift to a more bearish outlook as traders put a premium on puts. The 25D 1-week skew¹⁵ for BTC went from around 0% at the beginning of the month to almost 10%. On a 6-month basis, BTC 25D skew entered positive territory for the first time since June.



(chart via [glassnode](#))

15 - Put – call implied volatilities. A positive number means investors are placing a higher premium on puts than on calls, which signals bearish sentiment.

3

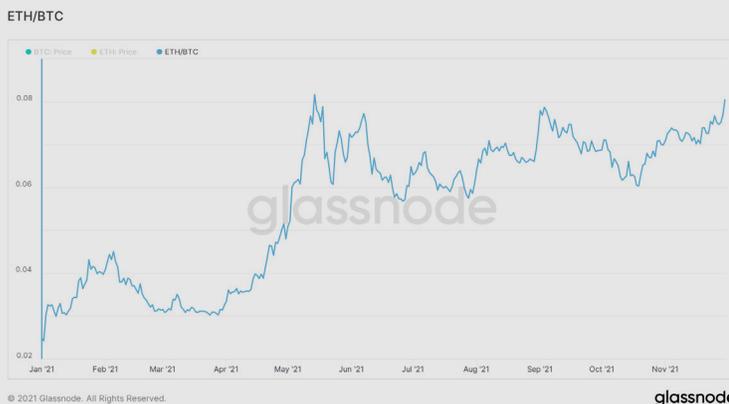
Ethereum

ETH delivered a lackluster performance in November with a modest price increase of 8.7%, which brings its year-to-date performance at 538%.



(chart via [Messari](#))

Nevertheless, during November ETH increased its outperformance of BTC, gaining more market cap share at BTC's expense, as can be seen in the chart of the ratio of the ETH and BTC prices:



(chart via [glassnode](#))

Ethereum did not have as many big-headline milestones as Bitcoin over the month, but the network can point to some notable developments:

- Total value locked in decentralized applications on Ethereum reached all-time highs.
- ETH's burn rate reached new highs, producing several days of net negative issuance.
- Ethereum development firm ConsenSys is reported to be raising a round at a \$3 billion valuation¹⁶.
- The Ethereum Name Service airdrop of ENS tokens¹⁷ pushed the project's market cap up to \$1.5 billion in the space of two days.

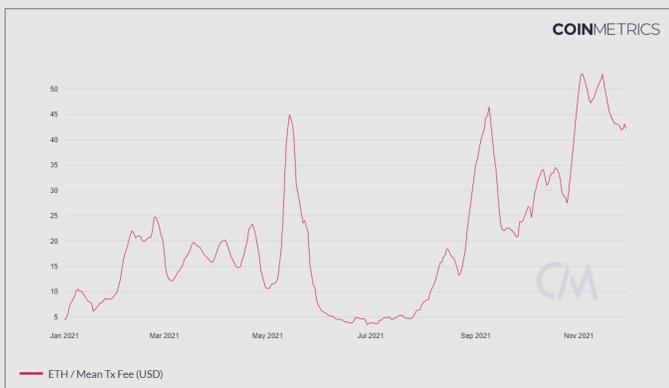
We look more closely at some of these below.

16 - <https://www.theblockcrypto.com/linked/120065/consensys-plans-funding-round-at-3-billion-valuation>
17 - <https://thedefiant.io/ens-airdrop-ethereum-governance-token/>

On-chain Data Sends Mixed Signals

Ethereum's EIP 1559 update went live at the end of August and introduced, among other features, the burning of most of the ETH used in base transaction fees. A surge in demand from Uniswap, tether and OpenSea transactions in early November led to an increased burn rate and a net new issuance for the month that was over 90% lower than July's net new issuance, a significant reduction in selling pressure from new tokens.

This relatively high burn rate is a consequence of transaction demand and also of steep transaction fees, which almost broke May's all-time daily high in USD terms (7-day moving average). During November, Ethereum's average transaction fee continued its post-summer climb, reaching a high of \$62 and rarely dipping below \$40.



(chart via [Coin Metrics](#))

The high fees could be behind the drop in the number of on-chain transactions and contract calls, both of which ended the month notably lower after October's surge, but still higher than during the summer lull. This is in spite of a notable growth in

Ethereum-based metaverse and gaming activity.

Higher fees may limit network use, but they also increase the amount of ETH burned which reduces the net inflow and therefore the selling pressure of new tokens. Which force will end up having a greater impact on price will depend on other factors, many of which are positive tailwinds:

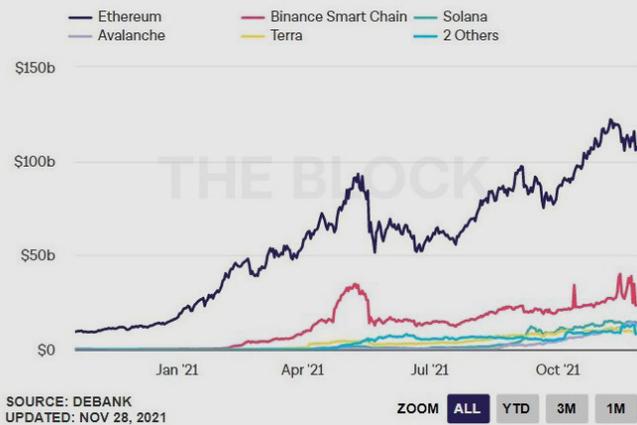
- Growing adoption of layer-2 (L2) platforms which enable faster and cheaper transactions while benefitting from Ethereum's security and ecosystem.
- Growing mainstream awareness of DeFi from both retail and institutional investors.
- Continued growth of interest in NFTs.

In spite of the decline in on-chain transactions and contract calls, and in spite of growing competition from other L1s (more on this below), Ethereum is still easily the industry leader in smart contract platforms, with more than 4x the total value locked¹⁸ (TVL) of the second largest, Binance Chain. Ethereum's TVL soared past \$100 billion for the first time in late October, and in November reached an all-time high (ATH) of over \$120 billion.

¹⁸ (*Total Value Locked is a metric that measures investment in decentralized applications by quantifying the amount deposited into smart contracts for lending, providing liquidity, etc. It is usually expressed in USD as deposits can be in a wide range of tokens. This makes it susceptible to price increases and decreases, which don't necessarily reflect investor interest in the applications in question. When taken in aggregate, it can also include doublecounting as tokens issued as a result of a smart contract deposit on one platform can then go into a smart contract deposit on another platform.)



Gross Value Locked of Smart Contract Platforms



(chart via [The Block Research](#))

Among the apps powering this growth are decentralized exchanges (DEXes) Uniswap and SushiSwap as well as liquidity pool Curve (all of which also reached ATHs in TVL in November).



Value Locked in DEXs



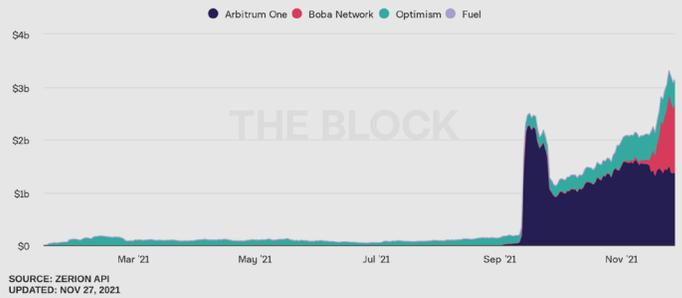
(chart via [The Block Research](#))

Strong Growth in Layer-2s

Total value locked in Ethereum layer-2 scaling platforms shot up this month, largely due to the launch of the Boba Network¹⁹ (formerly the OMG Network). Boba is based on the open-source code for Optimism but which allows faster withdrawal times. Within a few days its TVL had surpassed that of Optimism, making it the second most-used Ethereum scaling platform, behind Arbitrum.



Value Locked of Ethereum Optimistic Rollups



(chart via [The Block Research](#))

Part of Boba's TVL boost comes from the official launch mid-month of OolongSwap, the network's first Automated Market Maker (AMM), which is currently offering annual yields of over 1,000%²⁰ on some pools. Total value locked on the platform shot up to over \$500 million within a few days, highlighting the scale of the search for yield across the DeFi ecosystem. OolongSwap's high yields are likely to come down as liquidity grows in the pools, but even so, they and other DeFi apps will probably continue to attract significant

19 - <https://www.coindesk.com/business/2021/09/22/boba-network-launches-as-ethereums-newest-layer-2/>

20 - <https://oolongswap.com/#/farm>

capital given the low yields available in the traditional markets.

Although Arbitrum's TVL declined slightly over the month, it could end up getting a boost from the announcement that Binance has integrated Arbitrum²¹, allowing users to deposit funds to their accounts via the scaling solution.

Other notable layer-2 developments over the month were:

- Metis, an Optimism fork that allows data to be stored on IPFS, launched a \$100 million ecosystem fund at the beginning of the month²².
- And StarkWare, which relies on a different layer-2 technology (ZK rollups), raised \$50 million at a \$2 billion valuation²³ to accelerate expansion of the network.

Significant integrations, fundings and launches of L2 platforms are worth keeping a close eye on, as L2 development will be key to maintaining the network's growth in applications and users while Ethereum progresses towards the merge with proof-of-stake Ethereum 2.0.

21 - <https://www.coindesk.com/tech/2021/11/19/binance-fully-integrates-ethereum-scaler-arbitrum-one/>
22 - <https://thedefiant.io/metis-latest-optimistic-rollup/>
23 - <https://www.theblockcrypto.com/post/124479/ethereum-layer-2-developer-starkware-raises-50-million-now-valued-at-2-billion>

ETH Derivatives Reflect Growing Institutional Interest

The aggregated open interest on ETH futures reached its all-time high in early November, reaching \$13 billion on leading derivatives exchanges. ETH options open interest also reached an all-time high in November, of \$7.2 billion.

25D skew¹⁸ for 1-week and 1-month contracts went from near-zero or negative to 9-14% before retracing to 4-6%, signaling a shift towards a more bearish sentiment that softened at the end of the month. This does not just reflect the short-term outlook: looking further out, 3-month and 6-month 25D skew on ETH options went from around -15% at the beginning of the month to between 1% and -4%.



(chart via [Skew Analytics](#))

In spite of the all-time highs, ETH derivatives are still lagging those of BTC in terms of open interest and volumes. ETH USD spot volumes are usually close to those of BTC, and occasionally

exceed them. However, ETH futures and options open interest and volumes are approximately half those of BTC.

This could change with the launch of ETH micro futures on the CME on December 6, putting ETH futures within the reach of retail investors, and offering institutional investors a more granular hedging tool. The growth on CME of ETH futures volumes has easily exceeded the growth on other exchanges – given that the CME is largely an institutional exchange, this points to growing institutional interest in ETH derivatives. This is in sync with the general rotation seen in the market, and as our Q3 Market Observations Report²⁴ showed, this is also reflected in the changing composition of Genesis' trading and lending books.

24 - <https://genesistrading.com/about/quarterly-reports/>

4

Layer-1s

Asset	Price	Mkt Cap (bn)	NOV '21	YTD	30D RV
SOL	\$208.78	\$63.55	3.53%	11264.50%	102.43%
ADA	\$1.55	\$51.74	-20.60%	789.59%	69.44%
DOT	\$37.95	\$37.52	-10.60%	361.15%	104.04%
AVAX	\$120.45	\$27.03	88.64%	3216.93%	131.22%
LUNA	\$58.98	\$23.14	37.55%	8998.53%	119.46%
ATOM	\$27.52	\$6.22	-24.94%	375.92%	84.14%
FTM	\$2.14	\$5.44	-24.35%	12419.88%	155.89%

Top 7 L1 tokens, ranked by market cap. Price calculated at 00:00 UTC on Nov 30. Source: Messari

While growth in Ethereum’s layer-2 scaling solutions is progressing rapidly, even faster growth can be seen in alternative layer-1 (L1) smart contract blockchains that offer more rapid and low-cost computing power. Intensifying development work, significant funding and growing use are behind a market rotation out of BTC and to a lesser extent ETH, into the tokens of platforms such as Solana, Avalanche and others.

Most L1 tokens were hit hard by the strong correction at the end of November. Avalanche (AVAX), however, continued to soar and was the strong outperformer for the month.

Below we look at notable developments in some of the leading L1s.

Solana

After a strong run since July, Solana’s token SOL had a month of consolidation with a modest 3.5% increase. This still leaves its year-to-date performance at an impressive 11,260%.



(chart via [Messari](#))

Among the month’s key announcements signaling the strength of funding and protocol development are:

- The sell-out attendance of over 2,000 investors, builders and service providers from all over the world at Breakpoint, Solana's first developer conference.
- Alexis Ohanian's fund 776 plans to invest \$100 million²⁵ in Solana-based social media apps.
- Grayscale²⁶ launched a Solana trust.
- Neon Labs raised \$40 million²⁷ to scale its work on bringing Ethereum's EVM engine to Solana, which will facilitate Solana adaptations of Ethereum-based apps. DeFi lender Aave Protocol has already announced²⁸ its intention to launch a Solana-based version.
- Hxro Network raised \$34 million²⁹ from Susquehanna, Jump Crypto and others to build derivatives trading infrastructure on Solana.

A strong signal of the strength of institutional interest in Solana came in the form of the launch of a Solana price index³⁰ from Bloomberg and Galaxy Digital.

One of the emerging narratives around Solana, supported by many of the month's funding and development announcements, is that the network could become the de facto gaming and NFT

25 - <https://www.theblockcrypto.com/post/123763/reddit-co-founder-to-invest-50-million-in-social-media-on-solana>

26 A sister company of Genesis.

27 - <https://www.coindesk.com/business/2021/11/09/neon-labs-raises-40m-to-bring-evm-functionality-to-solana/>

28 - <https://twitter.com/StaniKulechov/status/1458044488513949696>

29 - <https://www.coindesk.com/business/2021/11/30/hxro-raises-34m-on-promise-of-derivatives-trading-infrastructure-for-solana/>

30 - <https://www.coindesk.com/business/2021/11/15/solana-hits-bloomberg-terminal-with-galaxy-backed-index/>

platform for the crypto ecosystem, given its fast and low-cost transactions. As well as a host of Solana gaming adaptations³¹, NFT drops³² and project financings³³, Solana Ventures, FTX and Lightspeed announced the launch of a \$100 million blockchain gaming fund³⁴.

November NFT sales on Solana were a fraction of the all-time-high achieved in October (\$83 million vs \$248 million³⁵), however, reflecting the impact the popularity of new collections can have. During the month, Solana slipped behind WAX to become the fourth most significant blockchain for NFTs in terms of total sales.

In spite of intense developer activity, the month was also a time of consolidation of total value locked (TVL) in USD terms. It ended the month at almost \$15 billion³⁶, just slightly off the all-time high of \$16 billion set at the beginning of the month, and is now the third most significant blockchain in terms of TVL, behind Ethereum and Binance.

31 - For example, <https://www.theblockcrypto.com/post/125341/blockchain-gaming-guild-avocado-raises-18-million-from-solana-ventures-and-others>

32 - For example, <https://www.coindesk.com/business/2021/11/02/deadmau5-gregory-siff-merge-digital-and-physical-art-with-solana-nft-drop/>

33 - For example, <https://www.theblockcrypto.com/linked/123391/faraway-funding-browser-based-blockchain-games-solana>

34 - <https://www.theblockcrypto.com/linked/123397/solana-ventures-ftx-lightspeed-100-million-blockchain-gaming-fund>

35 - <https://cryptoslam.io/solana>

36 - <https://defillama.com/chain/Solana/all/USD>

Avalanche

Avalanche maintained the strong momentum achieved since the summer after its August launch of an incentives program, and was one of the strongest performers of the ecosystem in November.



(chart via [Messari](#))

Like Solana, Avalanche also saw TVL hit an all-time-high in November, but in this case it happened towards the end of the month after a steep increase of over 60% in USD terms (part of this can be attributed to the AVAX price increase).

Key catalysts during the month were:

- the launch of leading stablecoin USDT on Avalanche³⁷
- the announcement of a \$220 million investment fund³⁸ for ecosystem development

37 - <https://medium.com/avalancheavax/tether-token-usdt-launches-on-avalanche-baf5a313f1a7>

38 - <https://www.theblockcrypto.com/linkedin/122729/avalanche-launches-fresh-200-million-incentive-fund>

- the listing of an Avalanche ETP (symbol: AVAX)³⁹ on the SIX Swiss Exchange
- the announcement of an alliance with Deloitte to develop a disaster recovery blockchain application⁴⁰
- and a heated Twitter debate⁴¹ triggered by Avalanche investor Zhu Su on the case against Ethereum and for newer smart contract platforms.

Looking forward, we can expect to see continued migration from Ethereum apps to Avalanche apps, as layer-1s compete with layer-2s for fast and inexpensive computing power. The Avalanche bridge is currently the second most-used bridge⁴² away from Ethereum (behind Ronin, the blockchain of metaverse game Axie Infinity).

39 - <https://finance.yahoo.com/news/21shares-announces-listing-polygon-avalanche-060000987.html>

40 - <https://www2.deloitte.com/us/en/pages/about-deloitte/articles/press-releases/deloitte-ava-labs-blockchain-state-local-government-natural-disaster-recovery.html>

41 - <https://twitter.com/zhusu/status/1462216210116853762>

42 - [https://dune.xyz/eliasimos/Bridge-Away-\(from-Ethereum\)](https://dune.xyz/eliasimos/Bridge-Away-(from-Ethereum))

Polkadot

The long-awaited launch of parachains on the Polkadot network gave a strong boost to its token DOT and has created high expectation for the technological achievement.



(chart via [Messari](#))

Polkadot is a base layer network that allows other blockchains built on the framework to connect with each other. This base layer is known as the relay chain, and connected blockchains are called parachains.

Polkadot focuses on interoperability, a shared security model and synced transaction finality for all connected parachains, offering developers more flexibility – developers can build their own blockchains with their own rules, going as granular as they wish while still benefitting from the pooled security assurances of the proof-of-stake relay chain and while easily connecting to other blockchains and applications within the system.

After years of development and amid growing concerns over delays, in November Polkadot had its first parachain

auction on the main chain. To bid on a parachain slot, projects have to lock up DOT for a given period. In the auction, a random block is selected from the previous seven days, and the parachain with the highest amount of DOT contributed by its community at that block time wins.

The first auction was won by DeFi application Acala⁴³, which received over \$1.30 billion in crowdloaned DOT, and the second a week later was won by Ethereum-compatible smart contract platform Moonbeam, locking up another \$1.4 billion of DOT⁴⁴. The process continues with the first five parachains scheduled to launch simultaneously in mid-December.

For a glimpse of the potential impact of Polkadot's technology, we can head over to the gaming sector. One of the bidders for parachain slots is decentralized gaming platform Enjin⁴⁵, with its own Efinity blockchain. A gaming platform that can seamlessly connect to other decentralized applications regardless of their underlying blockchain opens up new functionalities that could end up stretching the growth of the emerging decentralized metaverse.

43 - <https://www.coindesk.com/tech/2021/11/18/acala-wins-first-polkadot-parachain-auction-with-13b-in-dot-committed/>

44 - <https://moonbeam.foundation/news/moonbeam-wins-the-second-parachain-auction/>

45 - <https://ambcrypto.com/how-polkadots-parachain-auctions-are-benefiting-enjin/>

November was a pivotal month in three of the most transformational trends driving new market narratives: the metaverse, gaming and NFTs. They all saw significant inflows of investment and public attention in November; they all had major development announcements over the month; and each is increasingly overlapping the others.

NFTs

At the beginning of November, New York's NFT Week laid the vibrancy and quirkiness of the NFT ecosystem out for the world to see. The attendance (sold out at 5,500, with more than 3,000 reportedly on the waitlist⁴⁶), the number of parties and meetups, and the colorful display in Times Square pointed to a new level of enthusiasm for a concept many are still struggling to understand.

The growth in interest in and activity around Bored Apes, just one of many "collectible" series with unique images following a theme, pointed to a shift in focus from art NFTs to community NFTs. Owning an NFT is increasingly becoming about more than buying art – it is becoming more obviously about belonging to a community, which at the same time makes NFT holding increasingly part of someone's identity.

46 - <https://www.coindesk.com/business/2021/11/05/nfts-take-over-nyc/>

At the beginning of the month, New York hosted the first ever Ape Fest which combined physical displays with virtual ones in art galleries, held a costume party, and ended with a bash on an actual yacht – entrance was free for those who could prove ownership of one of the glowering primates.

Some of the other cultural milestones over the past month for the ape family included:

- A collaboration with Rolling Stone magazine⁴⁷ on a collectible Bored Ape edition.
- An appearance in the first minute of Post Malone's "One Right Now" video⁴⁸.
- The formation by major music label Universal Music Group of Kingship⁴⁹, a virtual band based on Bored Ape avatars that will perform their own music at metaverse concerts.
- A potential partnership with Adidas⁵⁰.
- TV host Jimmy Fallon⁵¹ and NBA star Rudy Gobert⁵² were just two of the celebrities showing off their apes.
- Timbaland launched a production

47 - <https://shop.rollingstone.com/products/rolling-stone-x-bored-ape-yacht-club-special-collectors-edition-zine>

48 - <https://www.youtube.com/watch?v=Tc0tLGWlqxA>

49 - <https://decrypt.co/85863/universal-metaverse-band-bored-ape-yacht-club-nfts>

50 - <https://decrypt.co/87113/adidas-partnership-teased-by-bored-ape-yacht-club-gmoney-eth-and-punks-comic>

51 - <https://twitter.com/jimmyfallon/status/1459164143626424321>

52 - <https://twitter.com/rudygobert27/status/1459751308894695428>

company⁵³ for Bored Ape owners.

- Many November sales greater than \$1 million, with Bored Ape #544 fetching over \$2.8 million⁵⁴.



Bored Ape #544

Community NFTs are where the intersection of physical and digital gets social, and the surge in interest is timed perfectly with the explosion of attention on metaverse platforms and the communities building on them.

53 - <https://decrypt.co/85986/timbaland-launches-ape-in-productions-bored-ape-nft-owners>

54 - <https://nonfungible.com/project/boredapeclub/BAYC/544>

Metaverse and Gaming

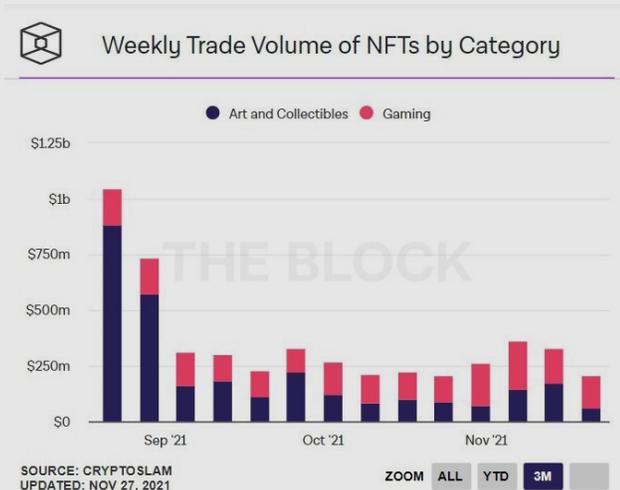
At the end of October, Mark Zuckerberg announced that Facebook was pivoting its focus to the metaverse and rebranding as Meta. Overnight, interest in decentralized metaverse platform tokens shot up with strong price increases across the category.

The token price increases were dwarfed by some of the sales volume increases. NFT sales on metaverse platform The Sandbox, for example, increased by more than 1,600% over the month of November according to CryptoSlam⁵⁵.

One trend becoming increasingly apparent is the melding of the metaverse, gaming and NFT categories. For example, NFTs are an integral part of many blockchain-based games which are likely to become a significant feature of the emerging metaverses. So, while many NFTs are independent collectibles unattached to specific platforms, their programmability and ability to interact with different applications are likely to increasingly push them into the realm of utility, while perhaps maintaining their status as collectibles. As with most new technologies, innovation tends to happen faster at intersections.

This can already be seen in NFT trading volumes, which are now leaning heavily towards gaming tokens:

55 - <https://cryptoslam.io/>



(chart via [The Block Research](#))

This rotation is further evidence that the development of the NFT ecosystem is still in its early stages. For instance, we have yet to scrape the surface of the potential of application NFTs that respond to triggers or circumstances. The transformation of Bored Apes into Mutant Apes by exposing them to a vial of Mutant Serum (which you can acquire on the OpenSea marketplace) is one example⁵⁶; breeding new Axie

Infinity NFTs by combining two existing ones with the Smooth Love Potion (SLP) token is another⁵⁷.

We are also likely to see further development over the next few months of the role of NFTs in DeFi applications, such as their use as collateral. More DeFi applications are likely to either emerge or adapt to work within the metaverses and games, creating self-sufficient economies with incentives and marketplaces and pushing the innovation even further. In early November, play-to-earn game Axie Infinity launched a native decentralized exchange called Katana, which currently has almost \$1.5 billion in total value locked⁵⁸.

What's more, we are likely to see growing interest from real-world companies in the concept, which could spill into the decentralized version due to the programmability, flexibility and user experience.

Asset	Price	Mkt Cap (bn)	NOV '21	YTD	30D RV
MANA	\$4.60	\$8.41	59.78%	5417.30%	187.66%
AXS	\$136.91	\$8.34	-0.39%	23088.08%	75.47%
SAND	\$6.73	\$6.14	328.41%	18070.21%	274.19%
FLOW	\$12.41	\$3.89	-10.98%	89.65%	84.49%
ENJ	\$3.50	\$2.94	35.78%	2479.09%	166.24%
WAXP	\$0.68	\$1.26	75.05%	1779.43%	199.59%

Top 6 metaverse and gaming tokens, ranked by market cap. Price calculated at 00:00 UTC on Nov 30. Source: Messari

56 - <https://opensea.io/collection/mutant-ape-yacht-club>

57 - <https://www.coingecko.com/buzz/axie-infinity-how-to-breed-axies>

58 - <https://defillama.com/protocol/katana>

- “Metaverse” has been mentioned 128 times so far this year during investor presentations, compared to just seven times last year, according to data from corporate research company Sentieo⁵⁹.
- All of the top seven companies by market cap in the S&P 500 are working on metaverse projects.
- Nike has filed at least seven metaverse-related trademark applications⁶⁰.
- Global gaming platform Roblox has over 260 metaverse-related job openings⁶¹.

This traditional-world interest is also reflected in the number and size of new funds announced:

- SoftBank invested \$150 million in South Korean metaverse platform Zepeto⁶².
- Sfermion raised a \$100 million fund⁶³ to invest in metaverse and NFT companies, backed by a16z, the Winklevoss twins, Alan Howard and others.
- Solana Ventures, Lightspeed Ventures and crypto exchange

59 - <https://www.axios.com/metaverse-wall-streets-favorite-buzzword-eeb58edb-2c30-490a-bd91-47116195a48f.html>

60 - <https://www.cnbc.com/2021/11/02/nike-is-quietly-preparing-for-the-metaverse-.html>

61 - <https://www.businessofbusiness.com/articles/metaverse-jobs-hiring-meta-facebook-nike-microsoft/>
62 - <https://www.theblockcrypto.com/linked/125763/soft-bank-invests-150-million-in-south-korean-metaverse-platform-zepeto>

63 - <https://www.theblockcrypto.com/linked/122856/firm-backed-by-alan-howard-winklevoss-twins-closes-100-million-metaverse-fund>

FTX have raised \$100 million⁶⁴ for a studio to finance games built on Solana.

- KuCoin Labs launched a \$100 million fund for metaverse projects⁶⁵.
- The Tron Foundation and NFT marketplace APENFT launched a \$100 million fund⁶⁶ for NFT projects.
- Metaverse-gaming protocol Enjin launched the Efinity Metaverse Fund⁶⁷ with \$100 million to boost its NFT marketplace.
- Play Ventures launched a \$75 million⁶⁸ blockchain gaming fund.
- Crypto fund manager Arca launched a \$30 million fund⁶⁹ to invest in NFTs.
- Crypto asset manager Osprey also reportedly plans to raise a fund⁷⁰ to actively invest in NFTs.

Many metaverse/gaming/NFT funding rounds were completed, too many to list here, but some of the largest ones were:

- NFT marketplace OpenSea is reportedly working on a funding

64 - <https://thedefiant.io/solana-web3-lightspeed-ftx/>

65 - <https://www.coindesk.com/business/2021/11/17/ku-coin-labs-launches-100m-fund-for-metaverse-projects/>

66 - <https://www.coindesk.com/business/2021/11/03/tron-foundation-afenft-launch-100m-fund-for-nft-projects/>

67 - <https://www.theblockcrypto.com/post/123271/enjin-floats-100m-efinity-metaverse-fund-to-boost-nft-marketplace>

68 - <https://www.theblockcrypto.com/linked/125648/play-ventures-sets-up-blockchain-gaming-fund-with-75-million-committed>

69 - <https://www.coindesk.com/business/2021/11/24/crypto-investment-firm-arca-launches-30m-fund-dedicated-to-nfts/>

70 - <https://www.theblockcrypto.com/linked/124840/crypto-asset-manager-plans-to-raise-hundreds-of-millions-to-actively-invest-in-nfts>

round that would value the company at \$10 billion⁷¹, just four months after it raised \$100 million at a \$1.5 billion valuation in a round led by Andreessen Horowitz.

- Blockchain gaming platform Forte raised \$725 million⁷² from a16z, Solana Ventures, Polygon Studios and others.
- Blockchain gaming studio Mythical Games raised \$150 million⁷³ in a Series C round led by Andreessen Horowitz.
- Metaverse-NFT-gaming firm The Sandbox raised \$93 million⁷⁴ in round led by SoftBank.
- 3LAU's NFT platform Royal raised \$55 million⁷⁵ in a Series A led by Andreessen Horowitz.
- NFT authenticator ORIGYN raised \$20 million⁷⁶ (at a \$300 million valuation) from Bill Ackman's Table Management, Paris Hilton, Polychain and others.

71 - <https://www.coindesk.com/business/2021/11/18/investors-offer-opensea-10b-valuation-in-new-round-report/>

72 - <https://www.coindesk.com/business/2021/11/12/big-money-apes-into-blockchain-gaming-with-725m-raise-for-forte/>

73 - <https://www.theblockcrypto.com/linkedin/123306/gaming-startup-mythical-games-raises-150-million-in-series-c-round-led-by-a16z>

74 - <https://www.theblockcrypto.com/linkedin/122936/crypto-sandbox-93-million-softbank>

75 - <https://www.theblockcrypto.com/linkedin/125056/a16z-the-chainsmokers-back-3laus-nft-platform-royal-in-55-million-series-a>

76 - <https://www.coindesk.com/business/2021/11/23/nft-authenticator-origyn-raises-20m-at-a-300m-valuation/>

The move towards greater clarity on official stances towards crypto assets took several large steps in November.

Among the most notable are:

- The release of a paper on stable-coin regulation by the President's Working Group on Financial Markets (WGFM).
- The denial (again) of a spot BTC ETF.
- The slow but relentless progress towards the passage of MiCA, a comprehensive EU law designed specifically for the crypto asset markets.

Stablecoins

In early November, the President's Working Group on Financial Markets (WGFM) – which consists of the Secretary of the Treasury and the Chairs of the Federal Reserve, the SEC, and the CFTC – released a long-awaited report on stablecoins, asking for more authority from Congress to regulate the growing industry. Rather than scream “intrusion”, the market seemed to react favorably to the wording, which did not even hint at a ban. This highlights that regulatory clarity will be a boon to crypto markets, boosting confidence and encouraging further inflows.

The report's recommendations did generate some controversy amongst crypto experts and politicians, however. It suggests that stablecoin issuers be regulated like banks, which many

feel is too onerous and could lead to concentration while dampening innovation. We can expect slow progress here, as any act of Congress takes time, especially when dissenting voices are loud.

ETFs

On November 14, we got the news that, yet again, the SEC had denied an application to list a spot BTC ETF⁷⁷. The reasons given were similar to previous rejections: mainly, the markets are not “surveilled” enough, which the SEC believes leaves crypto prices vulnerable to manipulation. The SEC reiterated its insistence on a comprehensive surveillance agreement with a regulated national market of size where the underlying asset is traded. The barrier here is that there is no “regulated national market of size” when it comes to spot crypto. The large crypto exchanges operating in the US are licensed, but they are not “regulated” in the way the SEC would like.

The main issue is that crypto exchanges do not look or behave like traditional exchanges:

- They have order books, but there the similarities end.
- Traditional exchanges do not engage directly with retail clients.

⁷⁷ - <https://www.coindesk.com/business/2021/11/12/sec-rejects-van-ecks-spot-bitcoin-etf-proposal/>

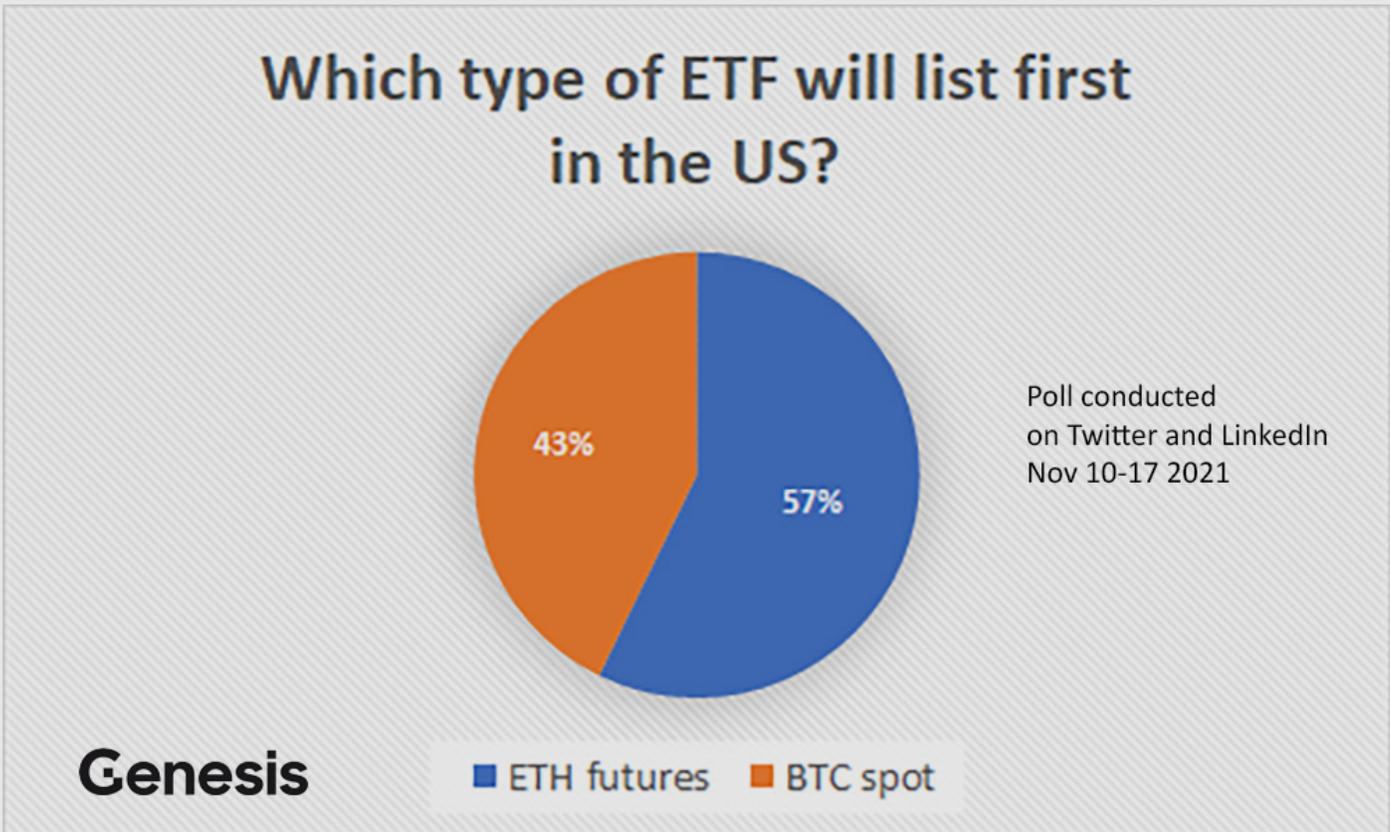
- Traditional exchanges do not handle custody.
- Traditional exchanges have onerous listing requirements.
- Traditional exchanges tend to monopolize the trading in certain stocks.

So, in spite of the arguments that a spot BTC ETF would be better for investors (which the SEC acknowledges), the rejections are based on a technicality that will be difficult to overcome without a profound change in the current securities laws that govern exchanges. This is not out of the question, but it will most likely take time.

Attention is now turning to the possibility of an ETH futures-based ETF. On November 29, Kelly Strategic Management filed for approval in the US of an ETH futures ETF⁷⁸, just four months after VanEck and ProShares were asked to withdraw theirs.

Earlier this month we ran a poll asking our community what they thought was more likely, a BTC spot ETF or an ETH futures ETF. The results leaned towards an ETH futures ETF, but without a resounding majority of support.

78 - <https://www.coindesk.com/business/2021/11/29/investment-firm-kelly-files-for-ether-futures-etf/>



MiCA

The Markets in Crypto Assets bill, known as MiCA, has been wending its mighty way through the regulatory halls of the EU, making slow but relentless progress.

On November 24, the European Council adopted the MiCA framework, which means it now enters into the negotiation phase with the European Parliament. This is a significant step forward toward eventual passage of the bill, with full implementation expected in 2024⁷⁹.

MiCA is attracting global interest because it will create a large common market regulation specifically created for this new asset class. While far from ideal, it at least acknowledges that crypto assets are hard to fit into existing buckets, and that a comprehensive approach is necessary for assets that are not, by nature, jurisdiction-specific. It also implicitly acknowledges that innovation is good for the economy and deserves regulatory support, even when it threatens to change hallowed financial institutions. It insists, however, on strict protection rules, especially around the one aspect most financial authorities feel threatened by: stablecoins.

Many hope that the negotiations will end up relaxing some of the stablecoin rules. Some worry that the restrictions will stifle innovation. But the potential of bloc-wide

regulatory clarity is likely to give further comfort to institutional investors and service providers that crypto assets are no longer on the outside looking in – with MiCA they will become an established part of the European financial landscape.

⁷⁹ - After ratification, expected in 2022, member states have two years to implement.

The significant developments of November will come in handy as we start to think about our end-of-year reflections and predictions for 2022. Many of the month's narratives are setting up a period of even more rapid development and progress in the coming quarter, against a backdrop of deep change in our established institutions.

Change is uncomfortable for many, yet it is something that all who work in crypto are not only used to, but actively embrace. The events of the past month, quarter and even year have shown that virtually all aspects of our daily lives are changing – from the way we transact and save to the way we interact with each other, including what our expectations are for our futures.

As the holiday season gears up and we enter what could end up being an even more pivotal month than November, we can't forget that times are hard for many around the world. The contents of this report, however, at least hopefully remind us that the crypto ecosystem is working hard to bring greater choice and resilience to everyone – to individuals, creators, entrepreneurs, investors and even institutions.

We at Genesis wish you all an interesting December. If you would like to talk to someone on our sales team, please reach out at sales@genesistrading.com.

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