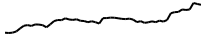
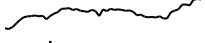
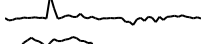


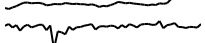

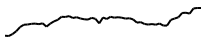

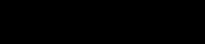


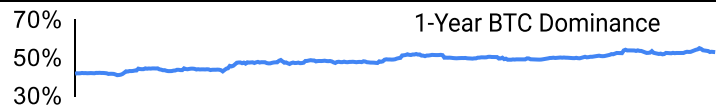
## Crypto Leaderboard

Rank	Name	Ticker	Price	24h	7d	30d	24h Vol \$m	MC \$m	1-Year Chart
1	Bitcoin	BTC	\$42,106	-1%	-5%	11%	20,835	824,039	
2	Ethereum	ETH	\$2,241	-2%	-5%	9%	16,112	269,705	
3	Tether	USDT	\$1.00	0%	0%	0%	29,104	90,627	
4	BNB	BNB	\$247	-2%	4%	-2%	647	38,021	
5	XRP Ledger	XRP	\$0.62	0%	-8%	-4%	1,289	33,460	
6	Solana	SOL	\$75.5	5%	1%	16%	2,877	32,293	
7	USD Coin	USDC	\$1.00	0%	0%	0%	10,687	24,462	
8	Cardano	ADA	\$0.62	-2%	14%	64%	772	21,746	
9	Lido stETH	STETH	\$2,239	-2%	-4%	9%	5	20,633	
10	Avalanche	AVAX	\$39.8	3%	30%	93%	1,566	14,611	

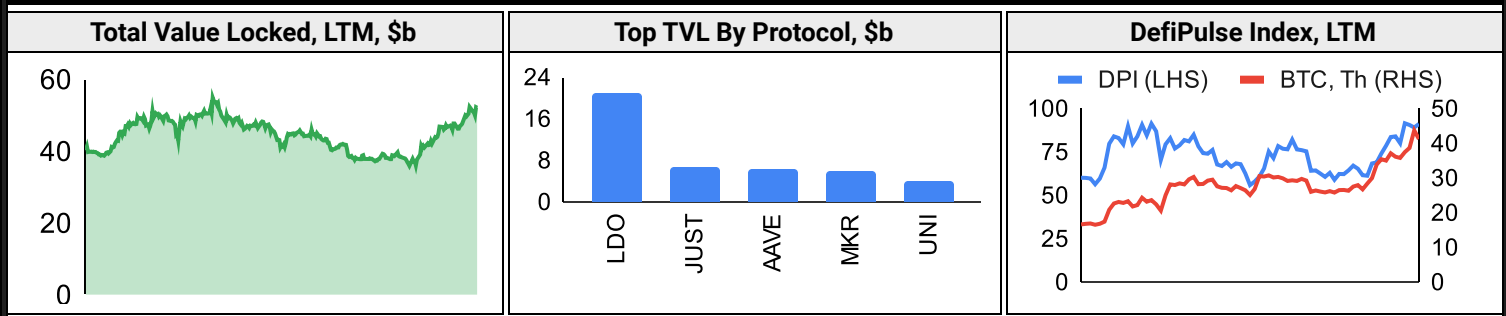
## Top & Bottom Performers - Top 100 Tokens

24h		7 Days		30 Days		90 Days		365 Days	
BONK	84%	BONK	114%	BONK	750%	BONK	13349%	KAS	2019%
AAVE	21%	INJ	70%	HNT	249%	TAO	558%	INJ	1980%
HNT	15%	OSMO	69%	BTT	141%	WEMIX	523%	RNDR	811%
GT	12%	HNT	54%	TIA	125%	HNT	406%	WEMIX	728%
KAS	-7%	LDO	-10%	FIL	-8%	TUSD	0%	SAND	-6%
BTT	-7%	SUI	-11%	TON	-9%	USDD	-1%	FLOW	-12%
ORDI	-9%	LINK	-12%	LDO	-10%	XDC	-8%	EOS	-19%
KCS	-15%	LUNC	-15%	LEO	-10%	TON	-10%	CHZ	-41%

## Category Performance

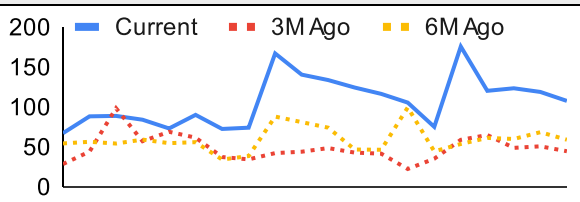
Category	7d	30d	90d	180d	365d	Ecosystem	7d	30d	90d	180d	365d
IoT/Data/Comp.	10%	52%	126%	140%	88%	Cosmos	13%	36%	126%	158%	316%
Gaming/Entertai	0%	26%	110%	130%	42%	Solana	-1%	17%	109%	124%	170%
Scaling	-1%	20%	69%	46%	40%	BSC	2%	16%	80%	73%	151%
Smart Contract	3%	20%	91%	85%	69%	Polygon	2%	12%	74%	67%	101%
Meme	-6%	13%	58%	36%	55%	Avalanche	-1%	11%	71%	83%	62%
CEXs	4%	12%	82%	75%	61%	Polkadot	-3%	11%	59%	53%	31%
Currency	0%	10%	38%	59%	55%	Tron	-3%	5%	35%	48%	55%
Lending	-1%	9%	74%	100%	72%	Ethereum	-6%	2%	56%	65%	63%
DEX	-3%	9%	102%	124%	87%						
Privacy	-4%	3%	29%	24%	-20%						
Other DeFi	-7%	-3%	66%	74%	215%						

## DeFi

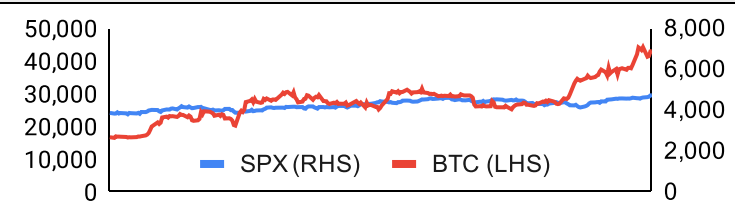


## Trading Volume

Aggregate Volumes by Product, \$b					Top Derivatives Exchanges, \$m and bps					Top Spot Exchanges, \$m		
Product	1d	7d	30d	O/I	Exchange	1d Vol	O/I	Mkr	Tkr	Exchange	Score	1d Vol
Spot	34	269	994	n/a	Binance	50,709	11,781	2.0	4.0	Binance	9.9	14,165
Perpetuals	222	1,820	6,520	240	Bybit	16,349	7,238	2.0	5.5	Coinbase	8.5	2,347
Futures	1	3	14	1	OKX	20,498	4,408	2.0	5.0	Kraken	8.2	961
Options	1	9	47	n/a	BlueBit	34,080	-	2.0	5.0	OKX	7.7	2,748

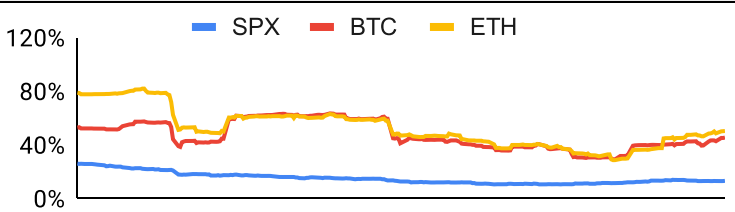
Daily Spot Volume, Top 100 Tokens Last 20d, \$b				Top Volume, 1d, \$m		Top Volume, %20d Avg		Low Volume, %20d Avg	
				USDT	46,980	BONK	801%	BUSD	12%
				BTC	21,427	WEMIX	369%	RETH	12%
				ETH	10,877	KCS	333%	STETH	18%
				USDC	5,862	WOO	332%	MNT	23%
				FDUSD	3,011	HNT	288%	LUNC	39%

## Traditional Finance

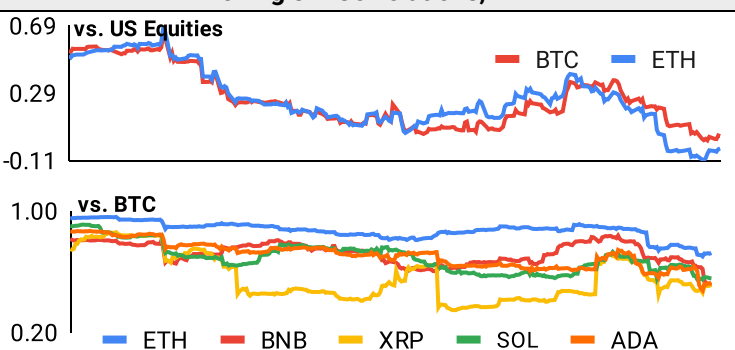
Global Equity Markets							SPX vs. BTC, LTM	
	US	USGrwth	UK	Germany	Japan	HK		
1D	0%	0%	2%	0%	0%	3%	40,000	6,000
7D	3%	3%	3%	2%	1%	4%	30,000	4,000
90D	7%	9%	3%	8%	1%	-2%	20,000	2,000
365D	20%	42%	9%	18%	15%	-18%	10,000	0

10-Year Treasury Yields							Commodities & FX					
	US	Brazil	UK	Germany	Japan	HK	Last	WTI	Gas	Gold	USD/EUR	USD/JPY
Last	3.93%	10.75%	3.77%	2.05%	0.70%	3.40%	Last	71.4	2.47	2,048	0.92	141.9
1d Chg	0.00	0.08	-0.02	-0.08	-0.01	-0.06	1d % Chg	-0.2%	3.4%	0.2%	0.7%	0.0%

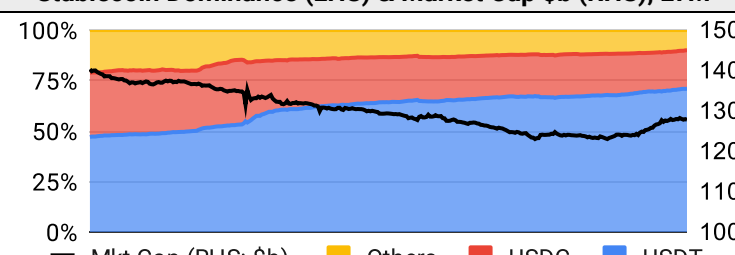
## Volatility

Annualized Volatility							Rolling 3M Annualized Volatility, LTM		
	BTC	ETH	BNB	XRP	SOL	ADA			
30D	49%	52%	52%	49%	103%	103%	120%	80%	40%
90D	43%	48%	39%	49%	105%	71%	80%	40%	0%
180D	39%	42%	37%	116%	92%	69%	40%	0%	0%
365D	44%	47%	44%	94%	97%	67%	0%	0%	0%

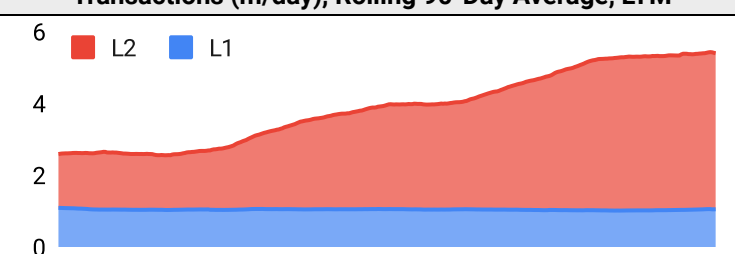
## Correlations

Intra-Crypto Correlations, LTM							Rolling 3M Correlations, LTM				
	BTC	ETH	BNB	XRP	SOL	ADA					
BTC							0.69	0.29	-0.11	1.00	0.20
ETH	0.84						vs. US Equities	vs. BTC			
BNB	0.67	0.68									
XRP	0.40	0.48	0.39								
SOL	0.63	0.64	0.55	0.40							
ADA	0.65	0.68	0.63	0.63	0.63						

## Stablecoins

Stablecoin Market Size and Volume, \$m					Stablecoin Dominance (LHS) & Market Cap \$b (RHS), LTM	
Ticker	Price	1d Vol	20d Avg Vol	Market Cap		
USDT	1.00	46,980	45,753	90,817		
USDC	1.00	5,862	5,460	24,499		
DAI	1.00	338	333	5,340		
TUSD	1.00	138	215	2,438		
BUSD	1.00	40	342	1,256		
USDD	0.99	39	45	717		
						Mkt Cap (RHS: \$b)    Others    USDC    USDT

## Ethereum Mainnet & Layer 2s

Mainnet & Layer 2 Transactions (m/day) and L2 TVL (\$m)					Transactions (m/day), Rolling 90-Day Average, LTM	
Network	1d	30d Avg	TVL	Tech Type		
Ethereum	1.2	1.1	-	Mainnet		
zkSync Era	0.7	0.8	512	ZKR		
Arbitrum One	0.6	0.7	8,300	ORU		
Linea	0.5	0.5	176	ZKR		
dYdX v3	0.4	0.4	350	App-specific ZKR		
Starknet	0.1	0.4	141	ZKR		
OP Mainnet	0.3	0.3	4,520	ORU		
Base	0.2	0.2	682	ORU		
Immutable X	0.2	0.2	257	App-specific Validium		
Mantle	0.3	0.2	248	Optimium		

Layer 2 Token Performance & Market Cap (\$m)					
	MATIC	IMX	OP	MNT	ARB
30d Return	-6%	81%	16%	27%	1%
Market Cap	8,030	2,790	1,970	1,840	1,440

## NFTs and DAOs

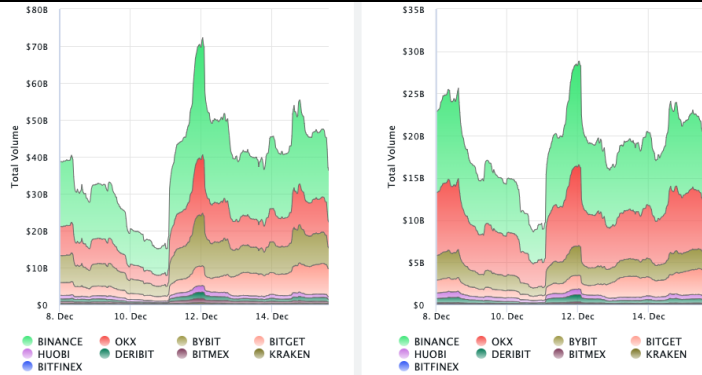
NFT Collection Stats (in ETH)						DAO Treasury Amount (\$m) and Composition					
Collection	Floor	Listings	3M Ret.	3M Vol	Market Cap	DAO	Treasury	Stables	BTC/ETH	Own Tokens	Other
CryptoPunks	54.8	966	20%	33,486	548,200	Arbitrum	4,013	0%	0%	100%	0%
Bored Ape	27.6	379	15%	175,929	275,980	Uniswap	2,541	0%	0%	100%	0%
Mutant Ape	5.2	939	10%	76,495	102,082	Mantle	2,331	6%	11%	75%	7%
Pudgy Penguins	10.6	561	172%	52,705	94,017	Optimism	1,886	0%	0%	100%	0%
Squiggle	9.1	223	-4%	2,793	90,845	Cardano	905	0%	0%	100%	0%
Autoglyphs	175.0	4	-12%	265	89,600	Ethereum	712	0%	100%	0%	0%
Fidenza	70.0	49	13%	1,507	69,920	ENS	630	3%	1%	96%	0%
Azuki	6.4	610	73%	30,688	64,069	Golem	394	0%	96%	4%	0%
The Captainz	4.6	140	43%	20,239	46,455	Gnosis	361	10%	27%	46%	17%
The Sandbox	0.3	437	1%	565	45,581	Lido	338	1%	26%	73%	0%

## Crypto News

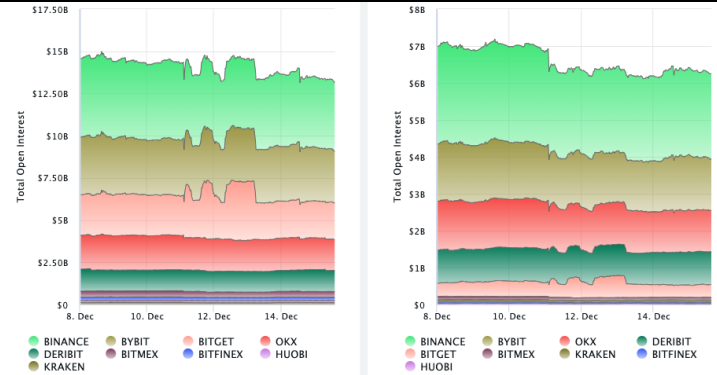
- [Financial Regulators Reiterate Call for Legislation to Address Crypto Risks - CoinDesk](#)
- [Protocol Village : Metagood, derrière les NFT OnChainMonkey, lève un tour de table de 5 millions de dollars - CoinDesk](#)
- [Protocol Village: Metagood, por trás dos NFTs OnChainMonkey, levanta rodada inicial de US\\$ 5 milhões - CoinDesk](#)
- [Cripto-friendly non significa cripto-facile - CoinDesk](#)
- [Crypto-friendly ne signifie pas crypto-facile - CoinDesk](#)
- [Bitcoin ecosystem reinvigorated by memecoins, new protocols - Cointelegraph](#)
- [US corporate interest in crypto strong despite implementation hurdles - Cointelegraph](#)
- [Even the Pope has something to say about artificial intelligence - Cointelegraph](#)
- [Web3 firm sees future where gamers rent out their in-game assets for crypto - Cointelegraph](#)

## Crypto Futures

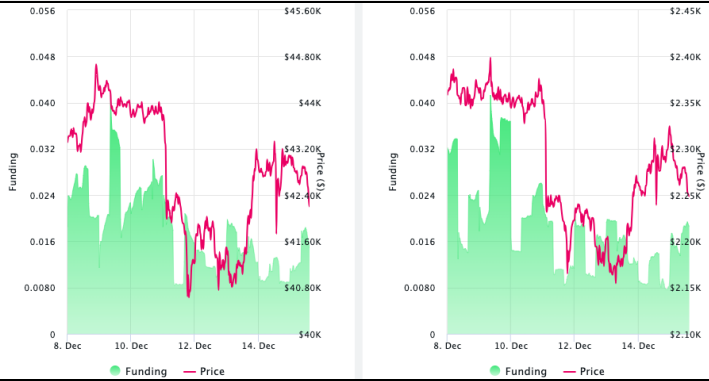
### Futures Volume (BTC LHS ; ETH RHS), 1d



### Futures Open Interest (BTC LHS ; ETH RHS)



### Volume Weighted Funding Rate (BTC LHS ; ETH RHS), 1d

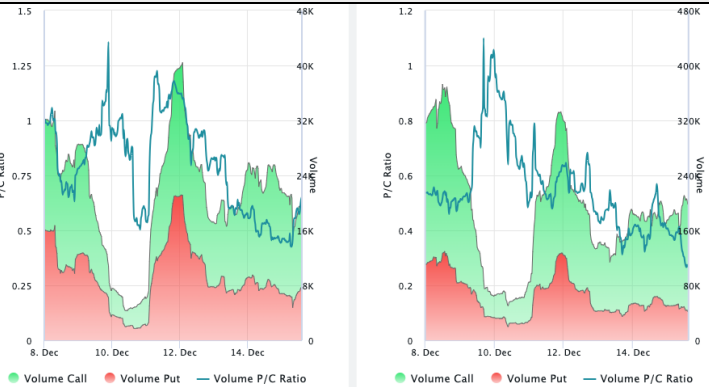


### Liquidations (BTC LHS ; ETH RHS), 1d

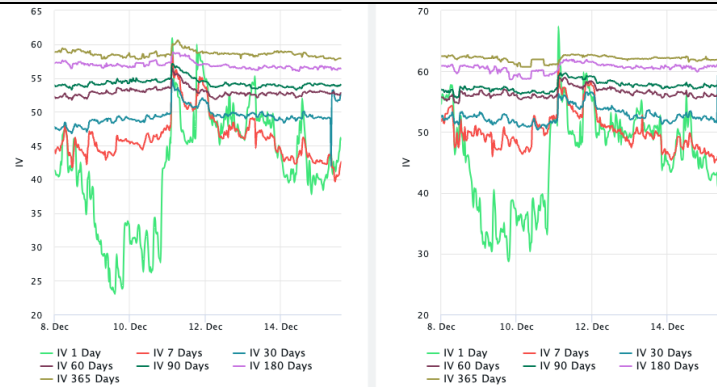


## Crypto Options

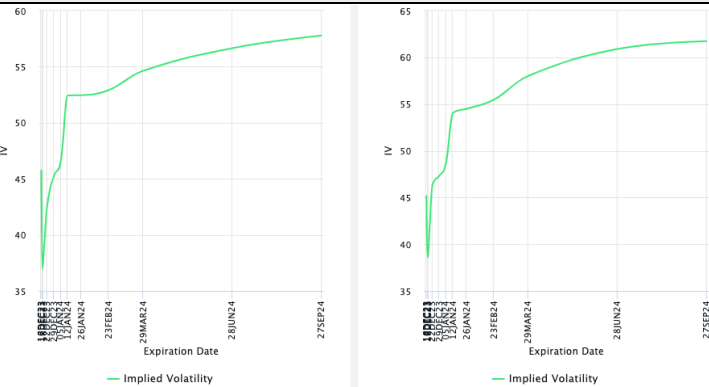
### Options Volume & Put/Call Ratio (BTC LHS ; ETH RHS), 1d



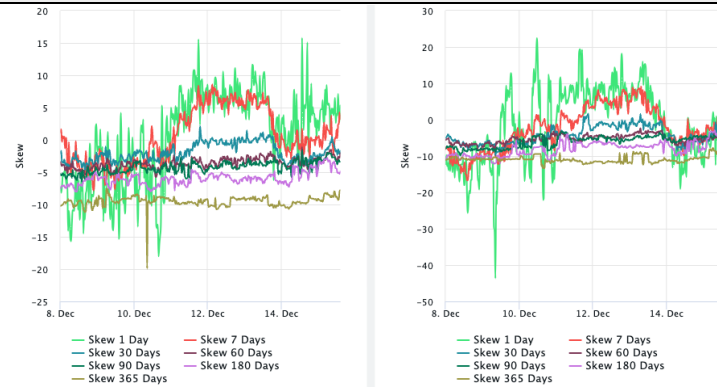
### ATM Implied Volatility (BTC LHS ; ETH RHS)



### ATM Implied Vol Term Structure (BTC LHS ; ETH RHS)



### 25 Delta Skew (BTC LHS ; ETH RHS)





December 15, 2023

### About GSR

GSR has over a decade of extensive experience in the crypto market, serving as a trusted liquidity provider and active, multi-stage investor. Our suite of services includes OTC Trading, Derivatives, and Market Making. GSR is actively involved in every major sector of the digital asset ecosystem, working with token issuers, institutional investors, miners, and leading trading venues.

For more information or if we can help with anything, please see [gsr.io](https://gsr.io) or contact us at [gsr@gsr.io](mailto:gsr@gsr.io).

Follow GSR for more content: [Twitter](#) [Telegram](#) [LinkedIn](#)

### Authors

Matt Kunke, Research Analyst [Twitter](#) [Telegram](#) [LinkedIn](#)  
Brian Rudick, Senior Strategist [Twitter](#) [Telegram](#) [LinkedIn](#)

### Required Disclosures

This material is provided by GSR (the "Firm") solely for informational purposes, is intended only for sophisticated, institutional investors and does not constitute an offer or commitment, a solicitation of an offer or commitment, or any advice or recommendation, to enter into or conclude any transaction (whether on the terms shown or otherwise), or to provide investment services in any state or country where such an offer or solicitation or provision would be illegal. The Firm is not and does not act as an advisor or fiduciary in providing this material. GSR is not authorised or regulated in the UK by the Financial Conduct Authority. The protections provided by the UK regulatory system will not be available to you. Specifically, information provided herein is intended for institutional persons only and is not suitable for retail persons in the United Kingdom, and no solicitation or recommendation is being made to you in regards to any products or services.

This material is not a research report, and not subject to any of the independence and disclosure standards applicable to research reports prepared pursuant to FINRA or CFTC research rules. This material is not independent of the Firm's proprietary interests, which may conflict with the interests of any counterparty of the Firm. The Firm trades instruments discussed in this material for its own account, may trade contrary to the views expressed in this material, and may have positions in other related instruments.

Information contained herein is based on sources considered to be reliable, but is not guaranteed to be accurate or complete. Any opinions or estimates expressed herein reflect a judgment made by the author(s) as of the date of publication, and are subject to change without notice. Trading and investing in digital assets involves significant risks including price volatility and illiquidity and may not be suitable for all investors. The Firm is not liable whatsoever for any direct or consequential loss arising from the use of this material. Copyright of this material belongs to GSR. Neither this material nor any copy thereof may be taken, reproduced or redistributed, directly or indirectly, without prior written permission of GSR

### Notes & Sources

All options data is based on Deribit and derivatives graphics are from Laevidas. Market returns are based on price returns for the following ETFs: VOO, QQQ, EWU, EWG, EWJ, and EWH. Onchain volumes are not considered and thus certain token volumes may be understated (e.g., stETH).

CoinGecko	Santiment	DefiLlama	CoinMarketCap	Laevidas
L2Beat	Google Finance	TradingView	Deribit	WorldCoinIndex
Cryptorank	Investing.com	NFT Price Floor	CryptoSlate	