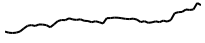
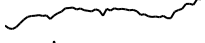
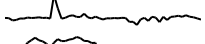


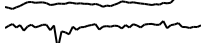



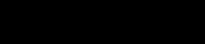


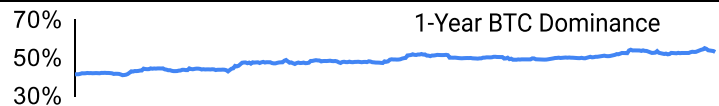
Crypto Leaderboard

Rank	Name	Ticker	Price	24h	7d	30d	24h Vol \$m	MC \$m	1-Year Chart
1	Bitcoin	BTC	\$41,780	-1%	-5%	13%	29,265	817,706	
2	Ethereum	ETH	\$2,221	0%	-3%	8%	17,363	267,097	
3	Tether	USDT	\$1.00	0%	0%	0%	54,377	90,576	
4	BNB	BNB	\$253	4%	10%	2%	1,742	38,884	
5	XRP Ledger	XRP	\$0.62	0%	0%	-6%	1,506	33,555	
6	Solana	SOL	\$70.6	4%	15%	25%	2,904	30,282	
7	USD Coin	USDC	\$1.00	0%	0%	0%	10,351	24,133	
8	Cardano	ADA	\$0.59	8%	39%	54%	1,278	20,722	
9	Lido stETH	STETH	\$2,220	-1%	-3%	8%	42	20,454	
10	Avalanche	AVAX	\$39.2	10%	60%	108%	2,980	14,364	

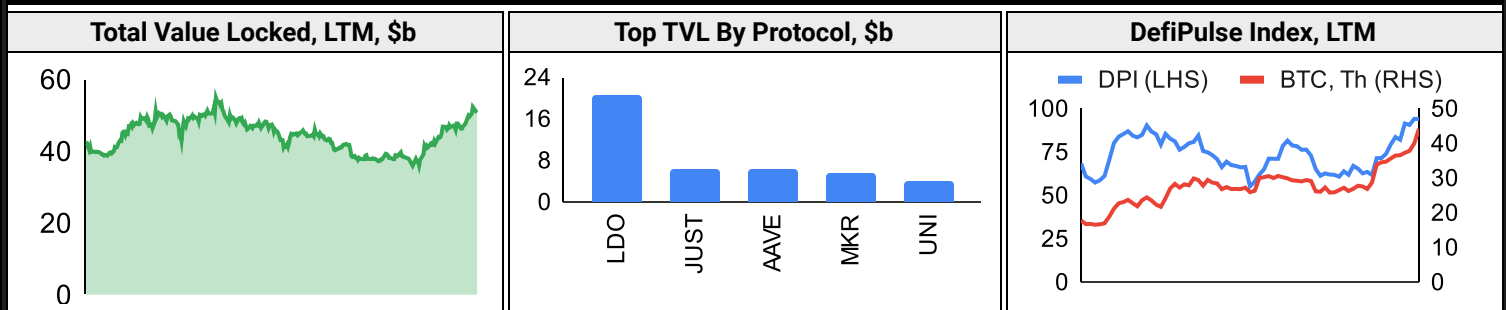
Top & Bottom Performers - Top 100 Tokens

24h		7 Days		30 Days		90 Days		365 Days	
OSMO	35%	BTT	162%	BONK	447%	BONK	5800%	KAS	1685%
KCS	30%	HNT	75%	BTT	173%	TAO	621%	INJ	1473%
TIA	26%	BONK	64%	HNT	168%	WEMIX	615%	WEMIX	811%
ATOM	23%	AVAX	60%	TIA	165%	AVAX	322%	RNDR	701%
EGLD	-3%	STX	-15%	FIL	-9%	DAI	0%	EOS	-20%
BTT	-5%	CFX	-16%	LEO	-10%	TUSD	0%	CAKE	-34%
TON	-5%	IOTA	-16%	XDC	-13%	USDD	-1%	CHZ	-39%
XEC	-6%	LUNC	-21%	TON	-15%	XDC	-6%	APE	-62%

Category Performance

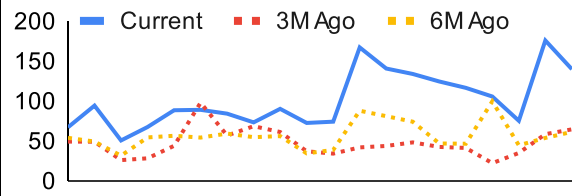
Category	7d	30d	90d	180d	365d	Ecosystem	7d	30d	90d	180d	365d
IoT/Data/Comp.	19%	39%	112%	112%	66%	Cosmos	8%	27%	117%	144%	242%
Gaming/Entertai	5%	22%	115%	120%	31%	Solana	7%	17%	108%	121%	141%
Scaling	7%	20%	72%	46%	38%	BSC	5%	17%	84%	69%	111%
CEXs	9%	19%	96%	88%	67%	Avalanche	3%	12%	79%	85%	58%
Meme	1%	18%	63%	41%	64%	Polkadot	3%	9%	67%	57%	28%
Smart Contract	10%	17%	91%	81%	62%	Ethereum	-3%	6%	65%	70%	63%
DEX	7%	14%	114%	128%	83%	Polygon	2%	5%	73%	59%	75%
Other DeFi	2%	11%	80%	82%	185%	Tron	7%	3%	40%	49%	57%
Lending	-3%	7%	78%	98%	70%						
Currency	2%	7%	38%	58%	51%						
Privacy	2%	3%	36%	27%	-19%						

DeFi

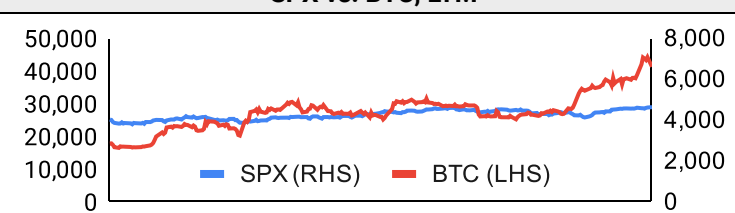


Trading Volume

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	44	272	963	n/a	Binance	61,668	11,670	2.0	4.0	Binance	9.9	17,436
Perpetuals	289	2,620	6,050	247	OKX	27,865	4,350	2.0	5.0	Coinbase	8.5	2,871
Futures	1	3	13	1	Bybit	20,170	7,339	2.0	5.5	Kraken	8.3	1,324
Options	2	12	47	n/a	KuCoin	2,339	1,623	2.0	6.0	KuCoin	7.7	1,241

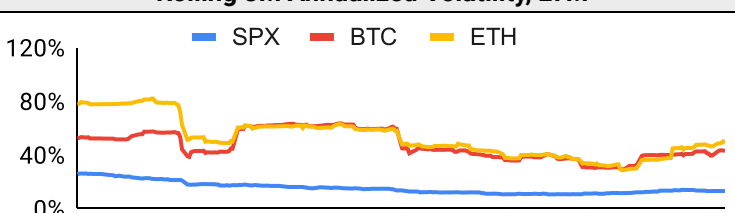
Daily Spot Volume, Top 100 Tokens Last 20d, \$b				Top Volume, 1d, \$m		Top Volume, %20d Avg		Low Volume, %20d Avg	
				USDT	58,772	KCS	480%	IOTA	19%
				BTC	31,202	OSMO	469%	LUNC	46%
				ETH	13,694	WEMIX	348%	RETH	57%
				USDC	7,461	INJ	330%	BGB	65%
				FDUSD	3,982	AVAX	317%	CFX	69%

Traditional Finance

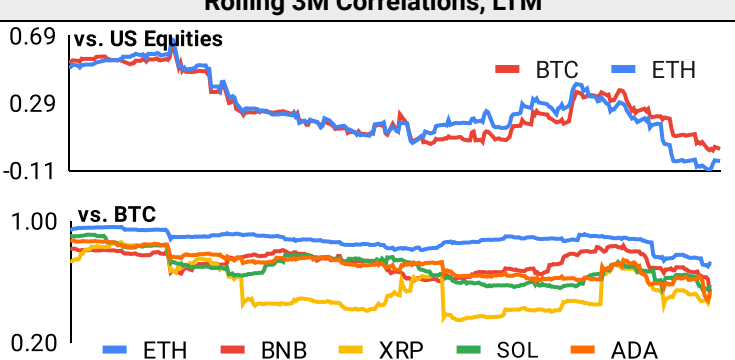
Global Equity Markets							SPX vs. BTC, LTM				
	US	USGrwth	UK	Germany	Japan	HK					
1D	0%	1%	0%	0%	1%	1%					
7D	1%	2%	0%	1%	1%	-1%					
90D	4%	6%	2%	7%	1%	-6%					
365D	19%	41%	7%	18%	15%	-20%					

10-Year Treasury Yields							Commodities & FX					
	US	Brazil	UK	Germany	Japan	HK		WTI	Gas	Gold	USD/EUR	USD/JPY
Last	4.22%	10.97%	4.00%	2.21%	0.71%	3.61%	Last	69.6	2.36	2,004	0.93	145.4
1d Chg	-0.02	0.04	-0.08	-0.06	-0.03	-0.06	1d % Chg	-2.4%	-3.0%	0.5%	-0.3%	-0.5%

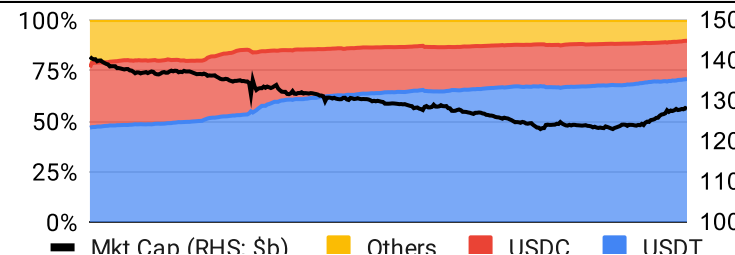
Volatility

Annualized Volatility							Rolling 3M Annualized Volatility, LTM				
	BTC	ETH	BNB	XRP	SOL	ADA					
30D	53%	53%	54%	55%	120%	96%					
90D	42%	47%	38%	49%	104%	65%					
180D	39%	42%	36%	116%	91%	66%					
365D	44%	47%	44%	94%	97%	66%					

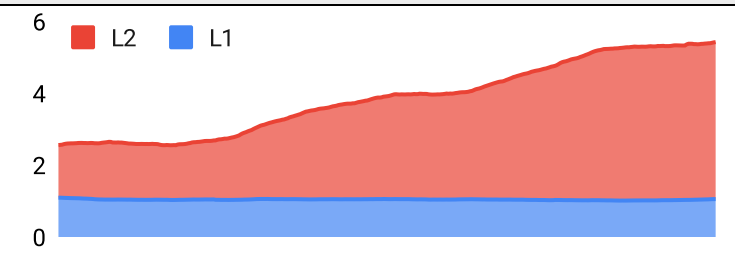
Correlations

Intra-Crypto Correlations, LTM							Rolling 3M Correlations, LTM				
	BTC	ETH	BNB	XRP	SOL	ADA					
BTC											
ETH	0.84										
BNB	0.67	0.68									
XRP	0.40	0.48	0.39								
SOL	0.63	0.64	0.55	0.40							
ADA	0.65	0.69	0.65	0.64	0.65						

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	58,772	43,246	90,676		
USDC	1.00	7,461	5,135	24,188		
DAI	1.00	317	320	5,346		
TUSD	1.00	274	219	2,609		
BUSD	1.00	625	385	1,465		
USDD	0.99	45	45	719		

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	1.1	1.1	-	Mainnet		
zkSync Era	1.0	0.8	529	ZKR		
Arbitrum One	0.8	0.7	8,270	ORU		
Linea	0.8	0.5	165	ZKR		
dYdX v3	0.6	0.4	355	App-specific ZKR		
Starknet	0.2	0.4	137	ZKR		
OP Mainnet	0.4	0.3	4,700	ORU		
Base	0.2	0.2	658	ORU		
Immutable X	0.2	0.2	267	App-specific Validium		
Mantle	0.2	0.2	238	Optimium		

Layer 2 Token Performance & Market Cap (\$m)					
	MATIC	IMX	OP	MNT	ARB
30d Return	5%	78%	37%	36%	3%
Market Cap	8,140	2,610	2,130	1,860	1,490

NFTs and DAOs

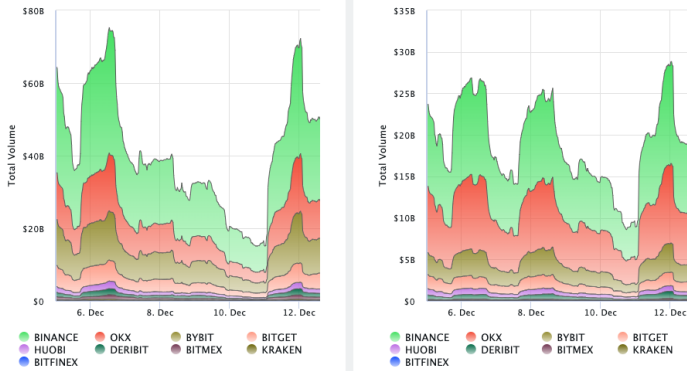
NFT Collection Stats (in ETH)						DAO Treasury Amount (\$m) and Composition					
Collection	Floor	Listings	3M Ret.	3M Vol	Market Cap	DAO	Treasury	Stables	BTC/ETH	Own Tokens	Other
CryptoPunks	55.4	965	20%	33,773	553,500	Arbitrum	4,084	0%	0%	100%	0%
Bored Ape	28.8	388	23%	176,440	288,400	Uniswap	2,561	0%	0%	100%	0%
Mutant Ape	5.6	837	19%	74,993	109,288	Mantle	2,426	8%	15%	72%	5%
Squiggle	9.5	217	-6%	2,798	94,443	Optimism	2,035	0%	0%	100%	0%
Pudgy Penguins	10.6	585	177%	49,743	94,391	Cardano	849	0%	0%	100%	0%
Autoglyphs	175.0	4	-12%	265	89,600	Ethereum	696	0%	100%	0%	0%
Fidenza	67.0	51	8%	1,337	66,933	ENS	644	3%	1%	96%	0%
Azuki	6.5	626	75%	30,538	64,890	Golem	384	0%	96%	4%	0%
The Captainz	4.9	136	39%	20,278	48,495	Gnosis	370	9%	26%	48%	17%
The Sandbox	0.3	455	7%	569	47,071	Lido	341	1%	25%	73%	0%

Crypto News

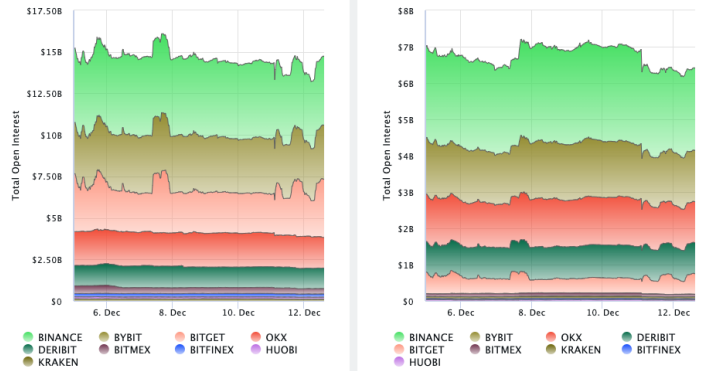
- [Former SEC Official Warns of the End of Binance — 'It's Only a Matter of Time Before Entire Binance Plea Deal Collapses' – Legal Bitcoin News](#)
- [Playing By The Rules: IRS Takes Aim At Cryptocurrency Tax Evasion And Fraud - Forbes](#)
- [Bitcoin, Ether Drop Spurs \\$500M in Liquidations, But BTC Entering "Never Seen Before" Era - CoinDesk](#)
- [World's First Bitcoin Bonds Receive Regulatory Approval in El Salvador - CoinDesk](#)
- [Controversial Bitcoin Ordinals-related bug added to U.S. National Vulnerability Database - CryptoSlate](#)
- [Clearpool's KYC-compliant marketplace lands on Optimism - Blockworks](#)
- [South Korea regulator wants banks to custody customers' VASP deposits - Blockworks](#)
- [DTCC closes deal to buy Securrency amid TradFi-crypto integrations - Blockworks](#)
- [U.S. CPI Inflation Trended Lower in November, Rising 3.1% From a Year Ago - CoinDesk](#)

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

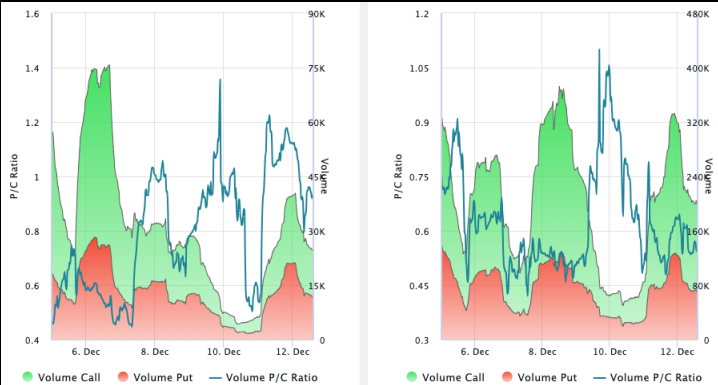


Liquidations (BTC LHS ; ETH RHS), 1d

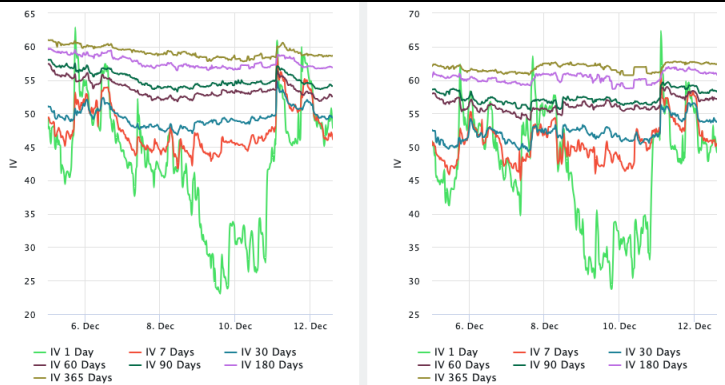


Crypto Options

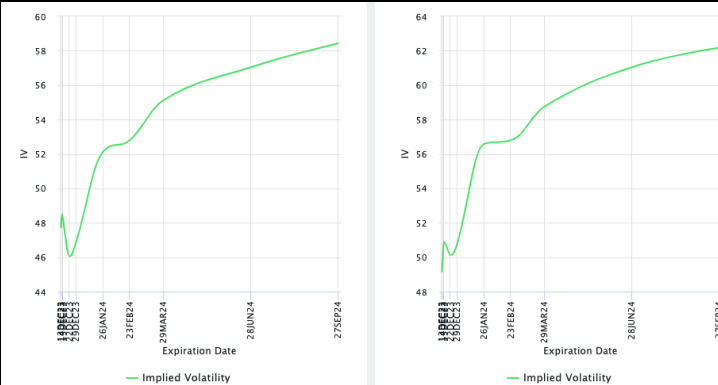
Options Volume & Put/Call Ratio (BTC LHS ; ETH RHS), 1d



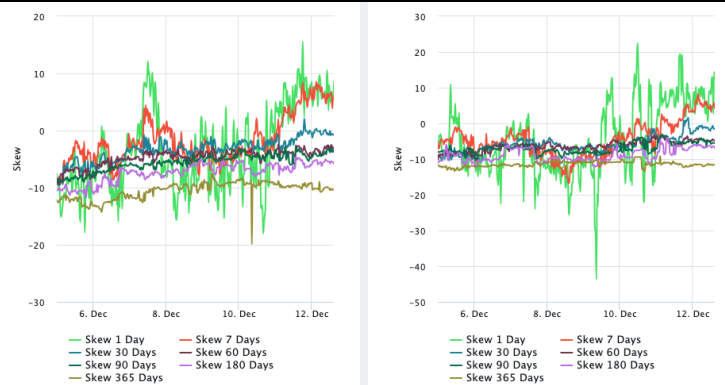
ATM Implied Volatility (BTC LHS ; ETH RHS)



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



25 Delta Skew (BTC LHS ; ETH RHS)





December 12, 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 or contact us at 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	