

STATE OF THE MARKET

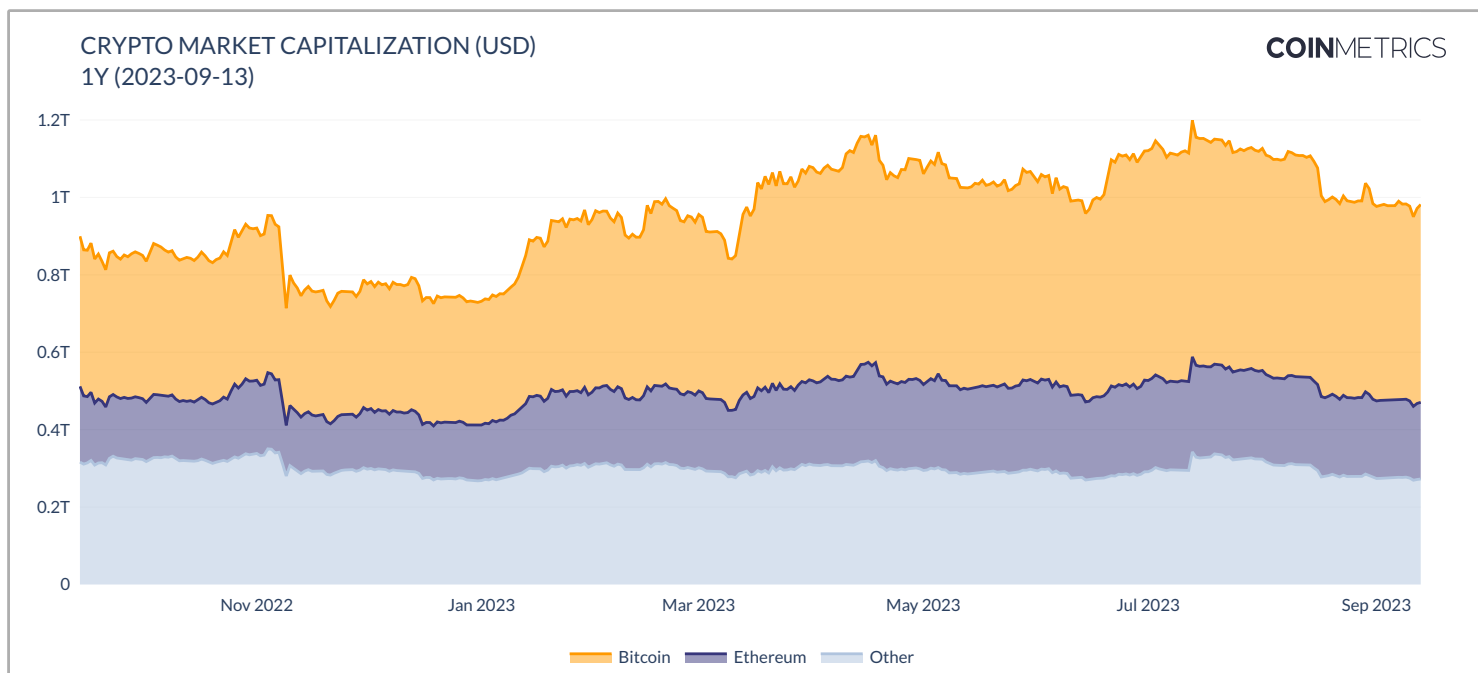
SEPT. 7 - 13, 2023

Coin Metrics' State of the Market provides an overview of cryptoasset market activity

CM

MARKET SUMMARY

Decentralized protocols are walking a fine line, incurring penalties from a pair of increasingly hostile U.S. regulators. Chief commodities regulator CFTC is settling charges against a handful of DeFi platforms, with Oplyn, ZeroEx, and Derindex each shelling out six-figure USD fines for offering "leveraged or margined retail commodity transactions." Coinbase CEO Brian Armstrong expressed skepticism about the regulators' purview over the DeFi domain, stating that these protocols "are not financial service businesses, and it's highly unlikely the Commodity Exchange Act even applies to them." Meanwhile, rival regulator SEC continues to harangue Ripple, doubling down on their insistence that the XRP is an illegal security. After Ripple's recent motion to reject SEC's bid for an interlocutory appeal, the regulator accused the firm of attempting to "delay an ultimate resolution so that they may continue freely selling XRP into public markets." In parallel, Ripple is engaging in some unusual M&A activity. After the firm's sudden acquisition of crypto custodian Fortress Trust last week, it was revealed that the takeover was accelerated by a "security incident" in which the company lost up to \$15M in BTC, USDC, and USDT. Many Fortress customers and partners— including BitGo CEO Mike Belshe— took to social media to express how "upsetting" the episode was, claiming that Fortress omitted facts with their initial statement that "no funds were lost." In truth, Fortress had suffered significant losses due to a 3rd party vendor integration ("Not BitGo," Belshe noted), and Ripple was forced to step in and make the custodian's customers whole. Meanwhile, crypto services provider Paxos is grappling with a self-inflicted wound, with a fat-fingered transaction including nearly 20 BTC (around \$515,000) in fees. When on-chain analysts initially discovered the mistaken transfer on Sept. 10th, F2Pool (the mining pool responsible for confirming the transaction) stated they would set the funds aside for the sender to reclaim. Though some speculated PayPal was responsible for the error, Paxos came forward with a formal statement on Sept. 13th, claiming the transaction as their own while also clarifying that "end users have not been affected and all customer funds are safe." It remains to be seen whether F2Pool will make good on their promise to return the fee, with co-founder Chun Wang openly musing on whether the pool should instead redistribute the fee to miners. The FTX bankruptcy estate is working on their own clawback, suing cross-chain infrastructure provider LayerZero Labs for \$85M on the basis of "fraudulent transfers" and "unjust enrichment." The complaint alleges LayerZero exploited inside info about FTX's financial woes, forcing repayment of a \$45M loan and withdrawing \$40M in crypto assets in the days leading up to the exchange's withdrawal freeze. On Wednesday, FTX got court permission to liquidate \$3.4B in crypto assets, including substantial holdings of BTC, ETH, and SOL. Though the sales are slowed with a weekly cap of \$100M, the court order clarified these limits don't apply for many of the larger-cap coins and stablecoin redemptions. Sustained sell pressure from the FTX estate— combined with the gridlocked status of a spot Bitcoin ETF— leaves crypto liquidity lacking in the closing weeks of Q3.



PRICE (CMBI CONSTITUENTS)

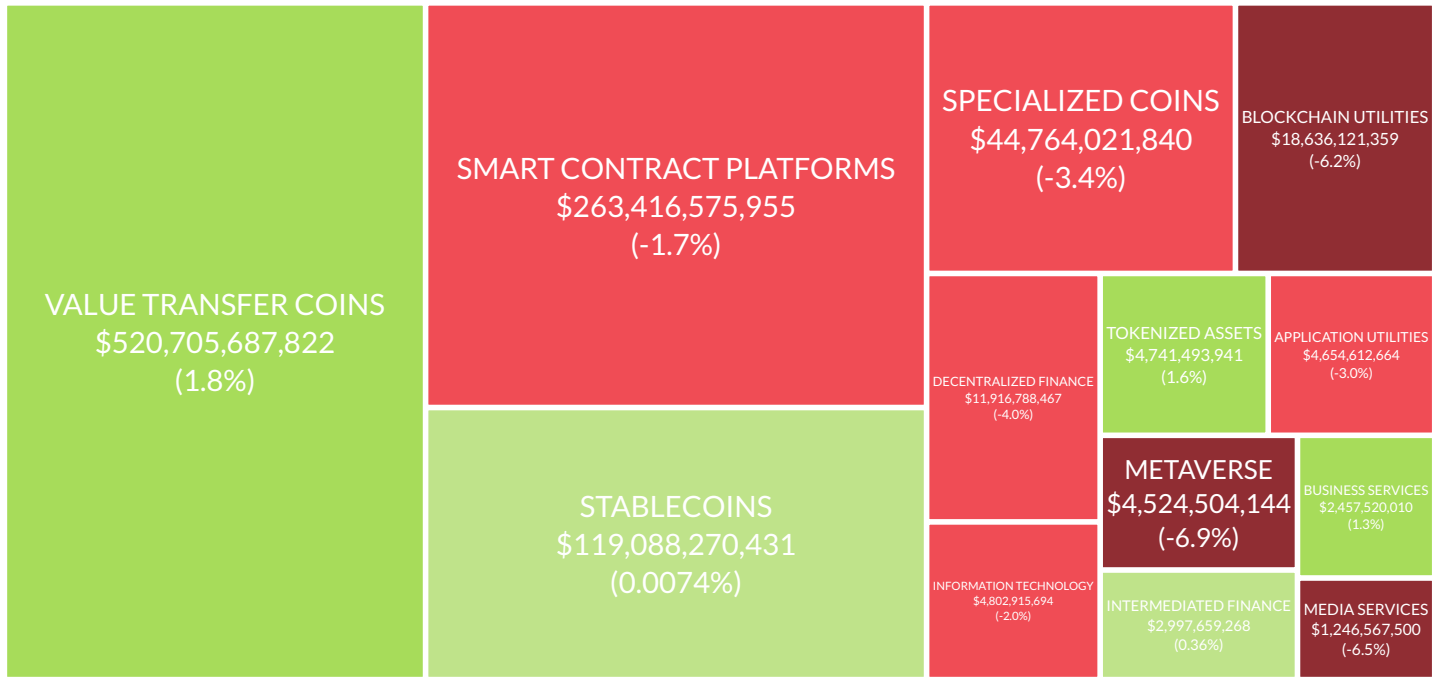
Coin Metrics' Reference Rate price calculated using a transparent, independent methodology robust to manipulation and derived from high quality constituent markets. Data based on 4pm EST NYC close.

ASSET	CLOSING PRICE	7D CHANGE	7D MAX	7D MIN	52W CHANGE	52W MAX	52W MIN
BTC	\$26,164.42	+1.16%	\$26,164.42	\$25,051.70	+32.36%	\$31,644.02	\$15,799.60
ETH	\$1,601.04	-2.10%	\$1,635.38	\$1,544.40	+6.89%	\$2,129.88	\$1,103.83
SOL	\$18.35	-6.59%	\$19.65	\$17.52	-45.03%	\$36.57	\$8.35
DOT	\$4.00	-6.25%	\$4.27	\$3.94	-42.52%	\$7.56	\$3.94
ADA	\$0.25	-3.12%	\$0.26	\$0.24	-47.03%	\$0.48	\$0.24
DOGE	\$0.06	-3.17%	\$0.06	\$0.06	+2.74%	\$0.14	\$0.06
TRX	\$0.08	+2.85%	\$0.08	\$0.08	+32.19%	\$0.08	\$0.05
BNB	\$212.13	-1.17%	\$214.75	\$204.88	-21.82%	\$353.50	\$204.88
AVAX	\$9.27	-6.91%	\$9.96	\$9.13	-49.60%	\$22.04	\$9.13
XLM	\$0.12	-1.76%	\$0.13	\$0.12	+17.24%	\$0.17	\$0.07
CMBI10	\$2,698.35	-0.22%	\$2,704.34	\$2,593.75	+13.63%	\$3,398.54	\$1,838.40

ASSET CLASSES

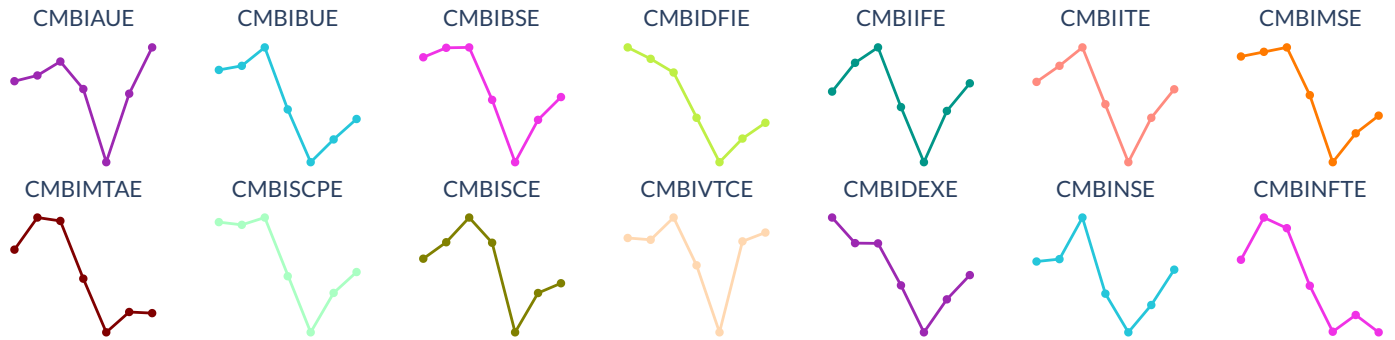
DIGITAL ASSET SECTOR 7D MARKETCAP (2023-09-13)

COINMETRICS



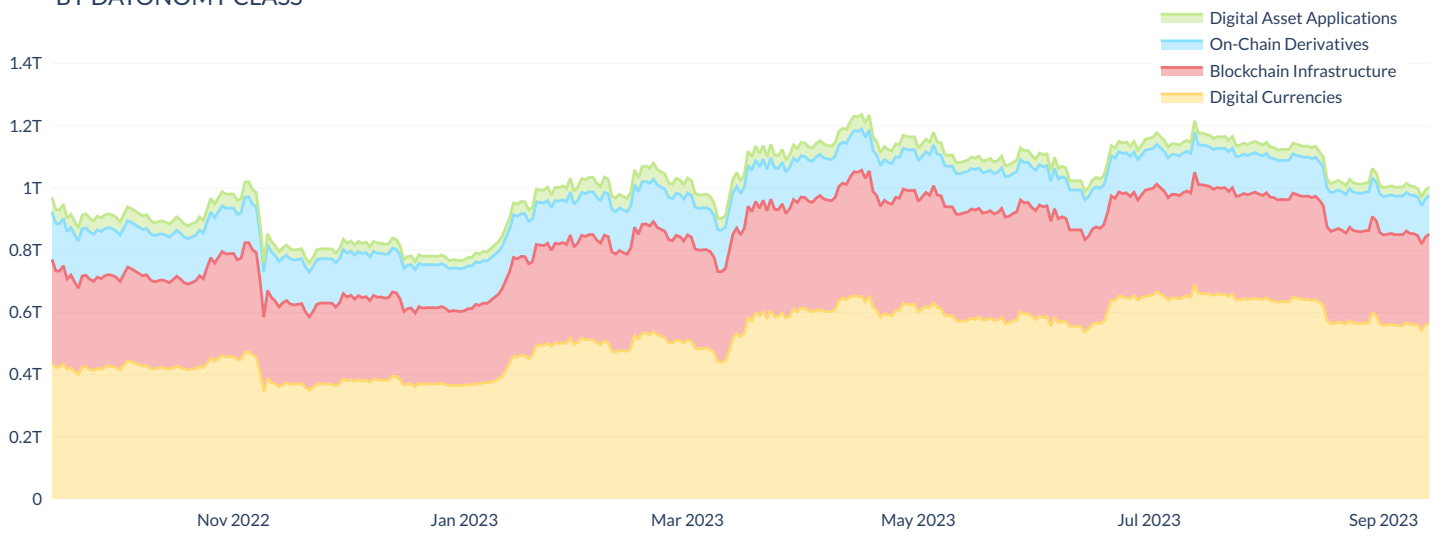
TRENDING SECTOR INDEXES, 7 DAY TREND

COINMETRICS



CRYPTO MARKET CAPITALIZATION (USD)
BY DATONOMY CLASS

COINMETRICS

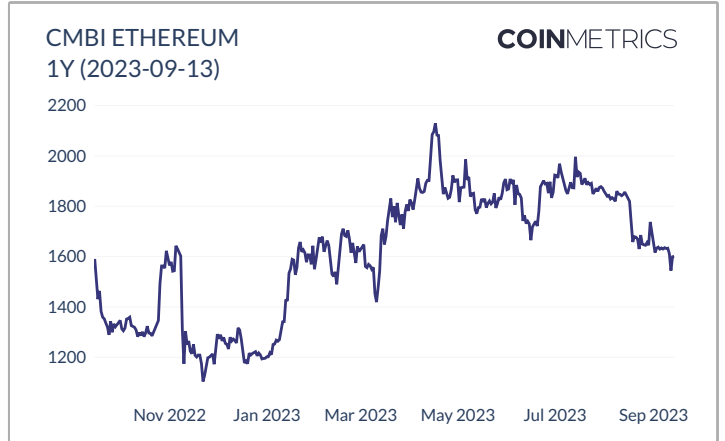


INDEX ROUNDUP

SINGLE ASSET INDEXES

The CMBI Single Asset series are institutionally designed cryptoasset benchmarks that accurately & reliably represent a real-time market aggregate USD value for singular crypto assets.

INDEX	CLOSING PRICE	7D CHANGE	7D MAX	7D MIN	52W CHANGE	52W MAX	52W MIN
CMBIBTC	\$26,164.42	+1.16%	\$26,164.42	\$25,051.70	+32.35%	\$31,644.02	\$15,799.60
CMBIBTCT	\$28,110.74	+1.16%	\$28,110.74	\$26,915.26	+32.35%	\$33,997.97	\$16,974.91
CMBIETH	\$1,601.04	-2.10%	\$1,635.38	\$1,544.40	+6.88%	\$2,129.88	\$1,103.83
CMBIETHHT	\$1,738.07	-2.10%	\$1,775.35	\$1,676.59	+6.88%	\$2,312.19	\$1,198.31



MULTI ASSET INDEXES

The CMBI Multi Asset series are institutionally designed cryptoasset benchmarks that accurately & reliably represent a real-time market aggregate USD value for baskets of crypto assets.

INDEX	CLOSING PRICE	7D CHANGE	7D MAX	7D MIN	52W CHANGE	52W MAX	52W MIN
CMBI10	\$2,698.35	-0.22%	\$2,704.34	\$2,593.75	+13.63%	\$3,398.54	\$1,838.40
CMBI10E	\$3,848.95	-2.69%	\$3,974.64	\$3,751.67	-26.44%	\$6,420.90	\$3,409.70
CMBI10EX	\$5,685.47	-2.19%	\$5,813.99	\$5,496.83	-7.19%	\$7,991.44	\$4,562.49
CMBI10M	\$10,156.48	+0.00%	\$10,156.48	\$10,156.48	-23.02%	\$13,220.96	\$9,310.27
CMBIBE	\$13,258.66	-0.02%	\$13,260.71	\$12,728.23	+22.68%	\$16,210.93	\$8,387.96

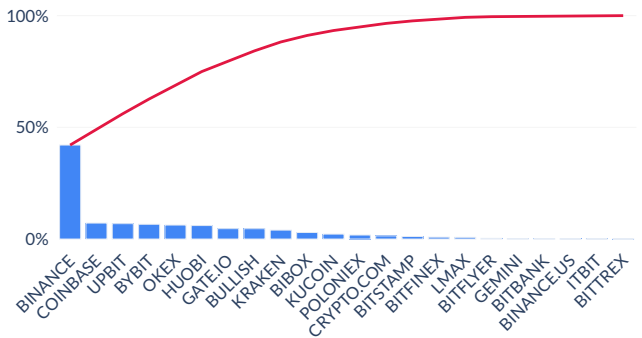


MARKET MOVEMENT

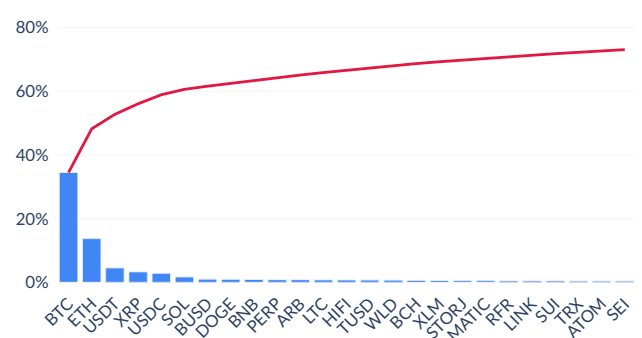
TRADING DIARY, 7 DAY

ADVANCING VOLUME	\$44,708,621,273
DECLINING VOLUME	\$36,897,649,299
ADVANCES	171
DECLINES	555

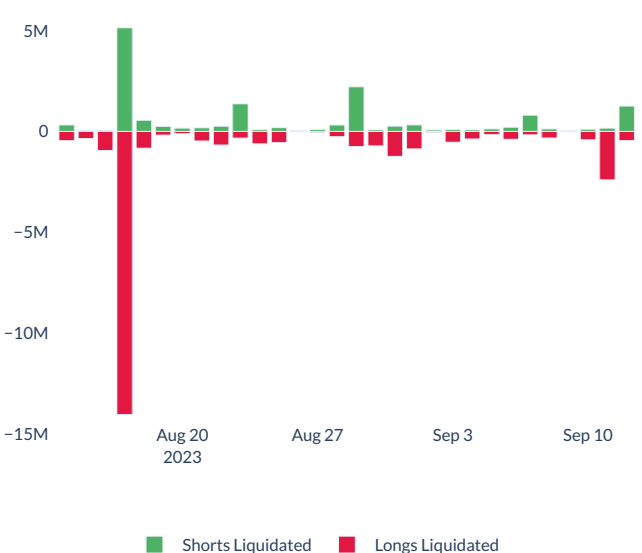
EXCHANGE SPOT SHARE, 7 DAY MEAN



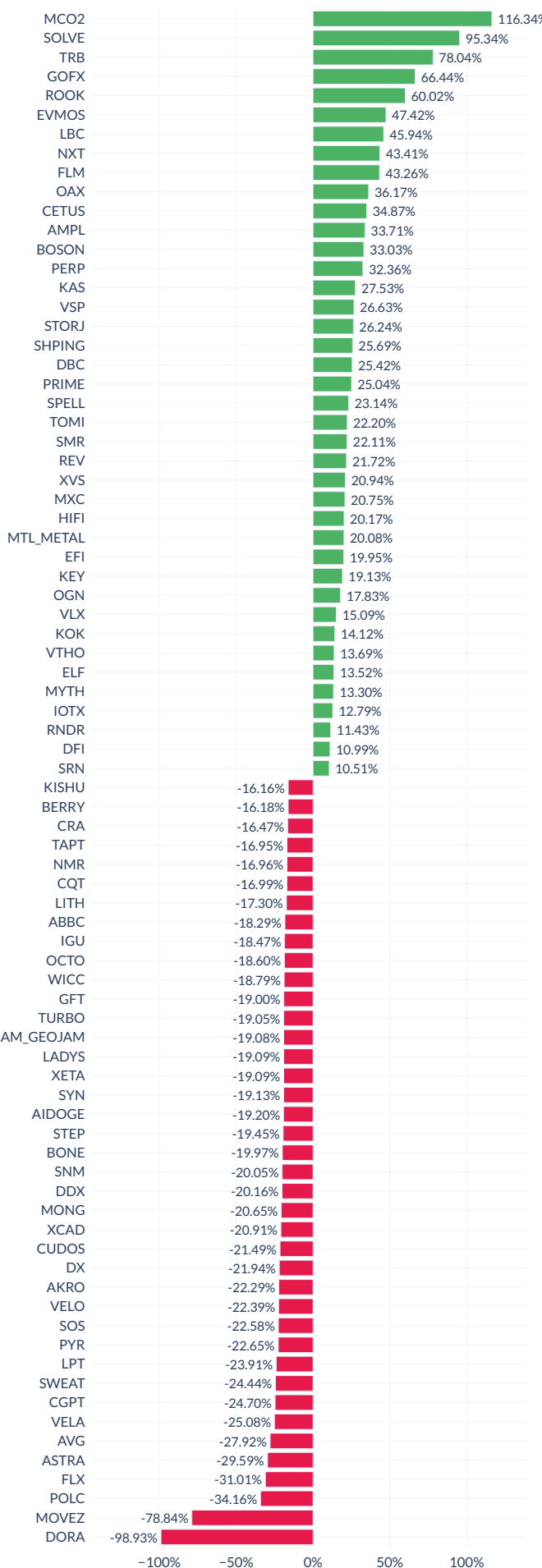
BASE ASSET SPOT SHARE, 7 DAY MEAN



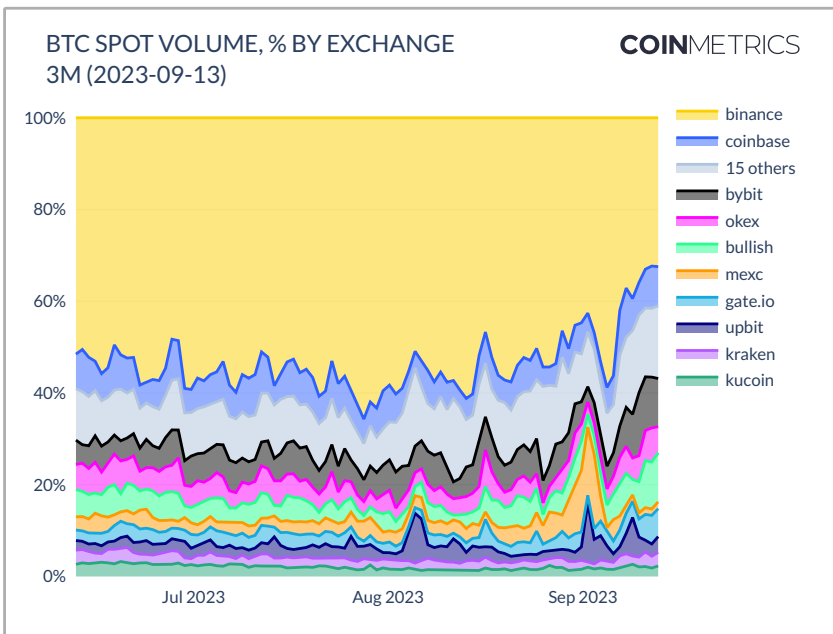
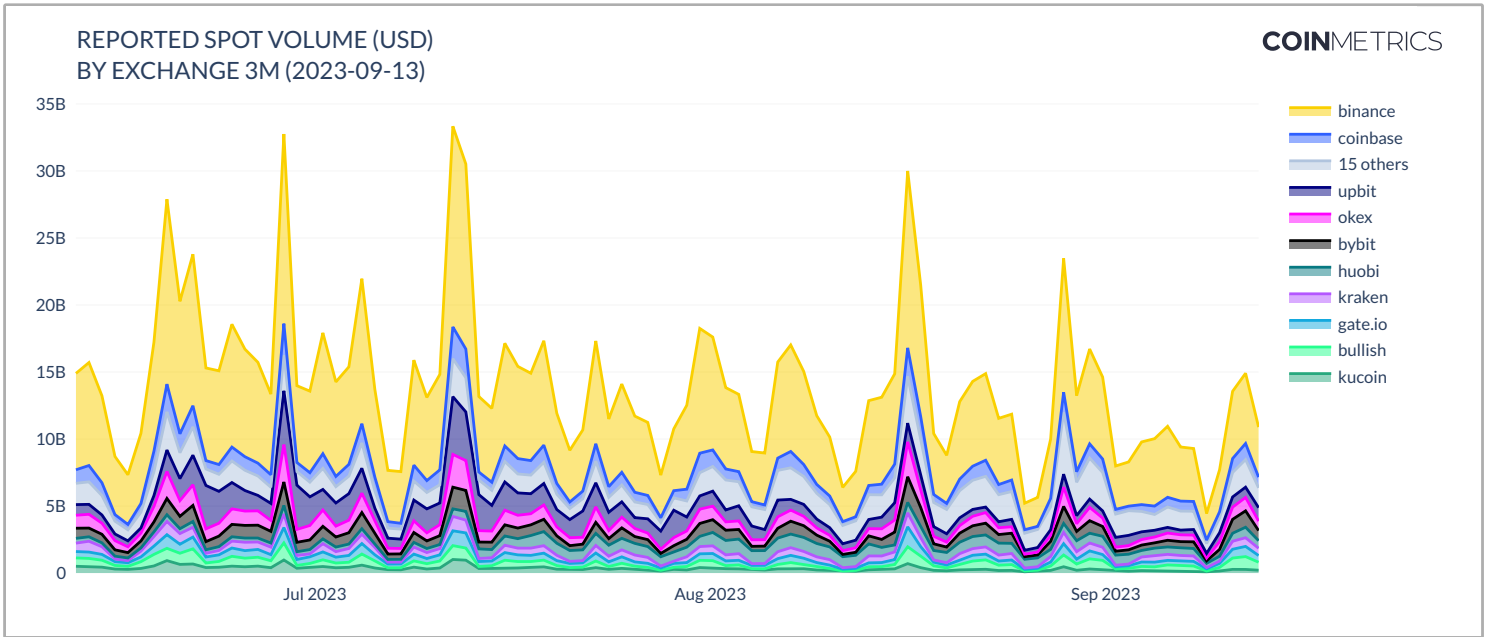
BTC PERPETUALS, TOTAL LIQUIDATIONS



PRICE CHANGE, 7 DAY



AGGREGATE VOLUME



BTC SPOT VOLUME LEADERS

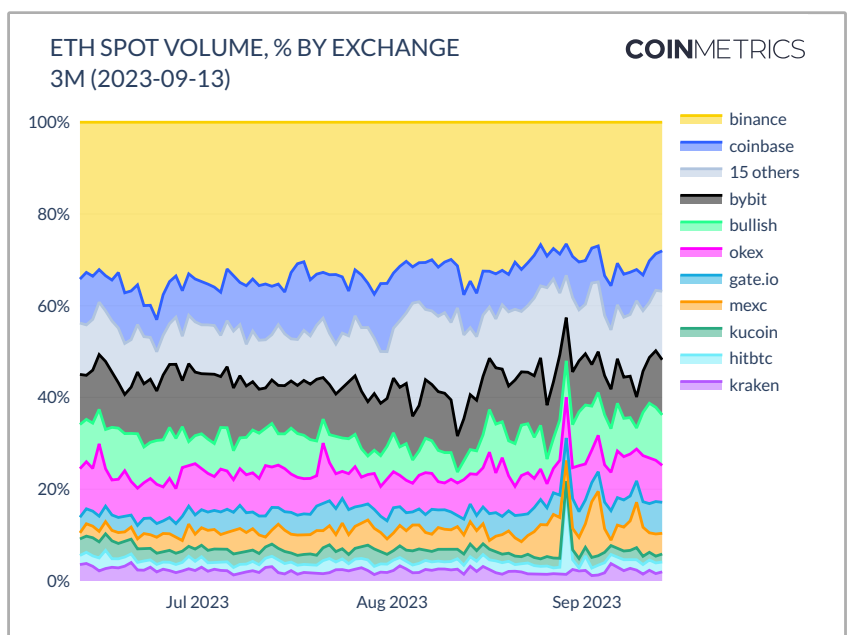
Top 10 exchanges by Bitcoin (BTC) spot volume reported over past 3 months.

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BINANCE	-16.79%	1,299,703,000	2,187,733,963	438,339,859
COINBASE	-6.05%	332,239,537	623,333,219	77,351,223
BYBIT	+66.38%	383,256,934	749,753,790	105,837,596
OKEX	+10.70%	232,528,258	501,775,285	52,180,872
BULLISH	+57.74%	330,481,616	693,850,749	37,342,868
MEXC	-47.56%	62,920,244	110,027,454	15,496,006
GATE.IO	+79.86%	192,511,213	421,852,001	39,288,773
UPBIT	+88.56%	121,277,126	180,257,252	70,710,274
KRAKEN	+22.74%	101,020,916	174,737,928	20,117,067
KUCOIN	+29.75%	77,244,277	124,927,827	29,633,755

ETH SPOT VOLUME LEADERS

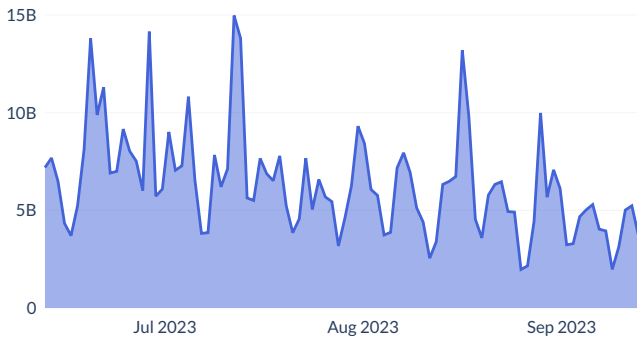
Top 10 exchanges by Ethereum (ETH) spot volume reported over past 3 months.

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BINANCE	-1.85%	489,394,093	813,933,585	130,957,558
COINBASE	+8.93%	137,702,626	244,355,807	27,793,110
BYBIT	+55.31%	164,426,456	289,968,998	27,538,055
BULLISH	+52.55%	163,009,499	321,930,336	18,706,000
OKEX	-0.96%	146,830,300	267,603,808	28,284,289
GATE.IO	+32.42%	99,669,040	171,413,889	19,010,290
MEXC	+0.62%	83,752,679	114,482,819	40,349,895
KUCOIN	+5.58%	28,085,082	44,979,654	10,746,136
HITBTC	+4.91%	35,213,022	60,603,317	9,260,863
KRAKEN	+2.33%	33,177,458	62,796,623	9,642,439

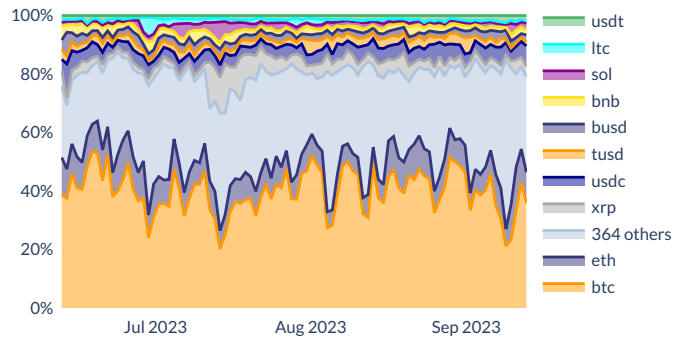


EXCHANGE SPOT VOLUME

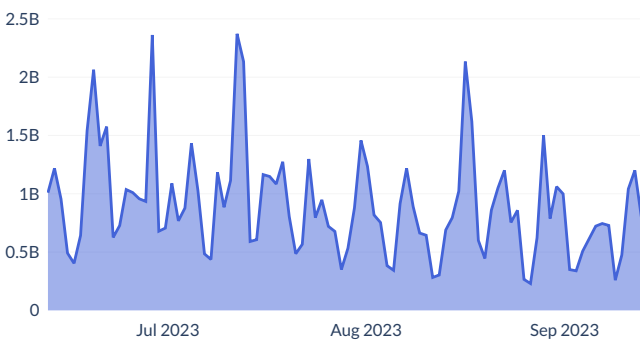
BINANCE DAILY USD SPOT VOLUME 3M (2023-09-13) COINMETRICS



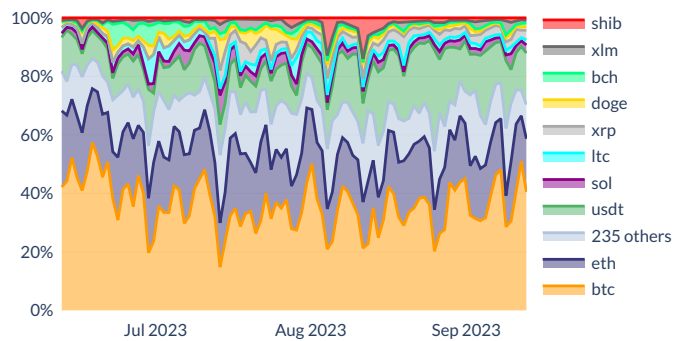
BINANCE SPOT VOLUME, % BY ASSET 3M (2023-09-13) COINMETRICS



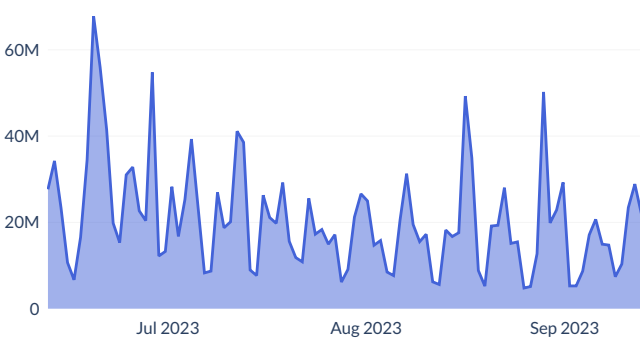
COINBASE DAILY USD SPOT VOLUME 3M (2023-09-13) COINMETRICS



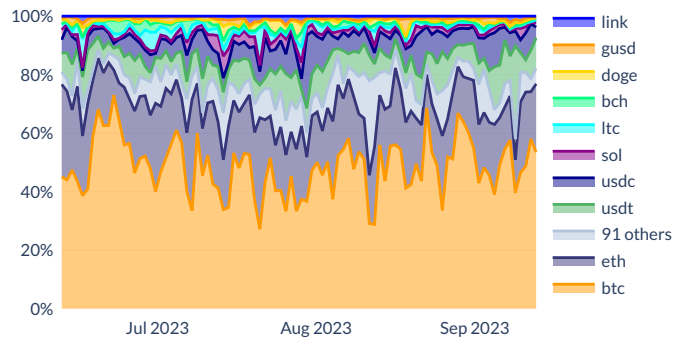
COINBASE SPOT VOLUME, % BY ASSET 3M (2023-09-13) COINMETRICS



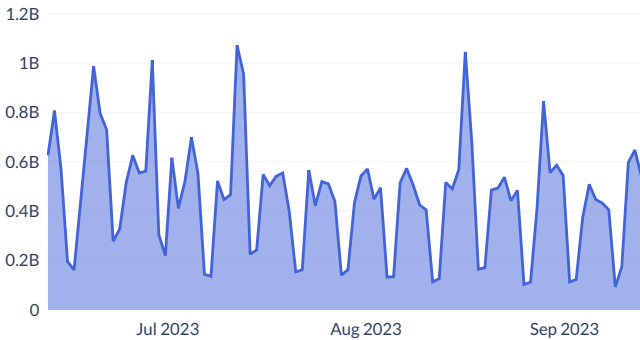
GEMINI DAILY USD SPOT VOLUME 3M (2023-09-13) COINMETRICS



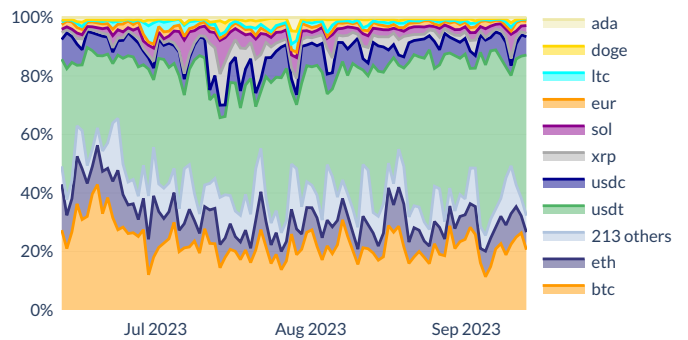
GEMINI SPOT VOLUME, % BY ASSET 3M (2023-09-13) COINMETRICS



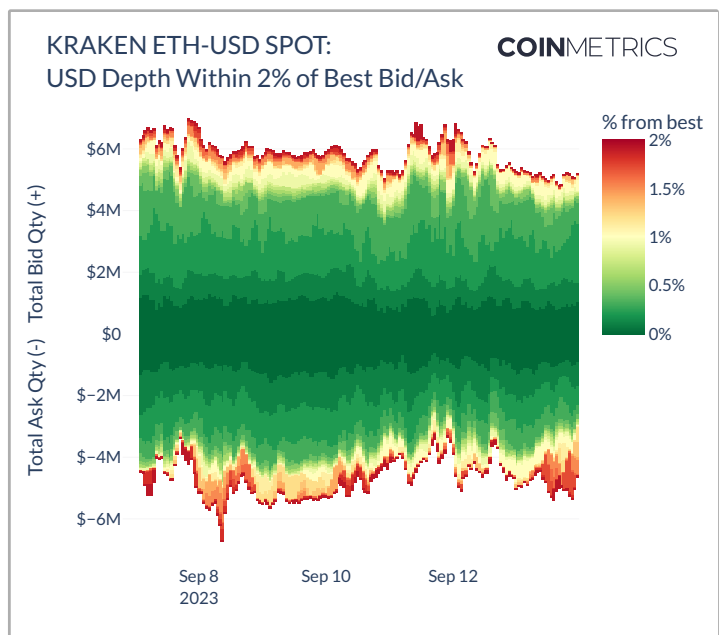
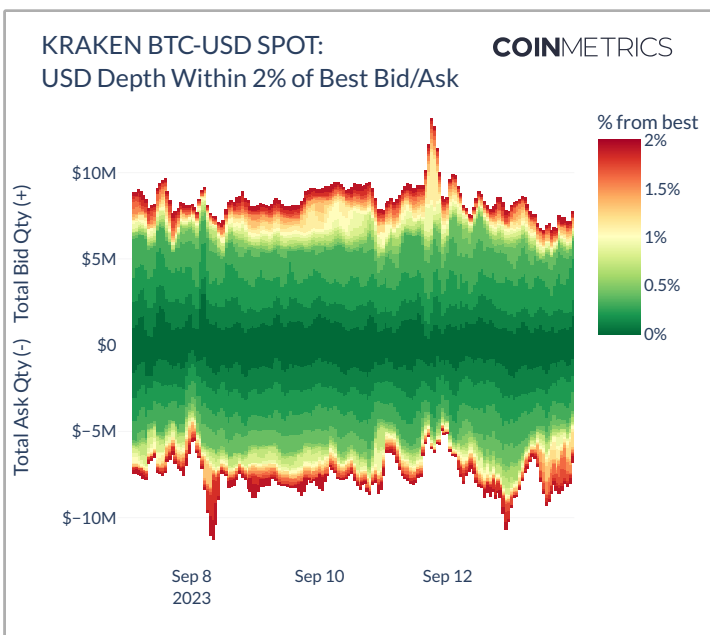
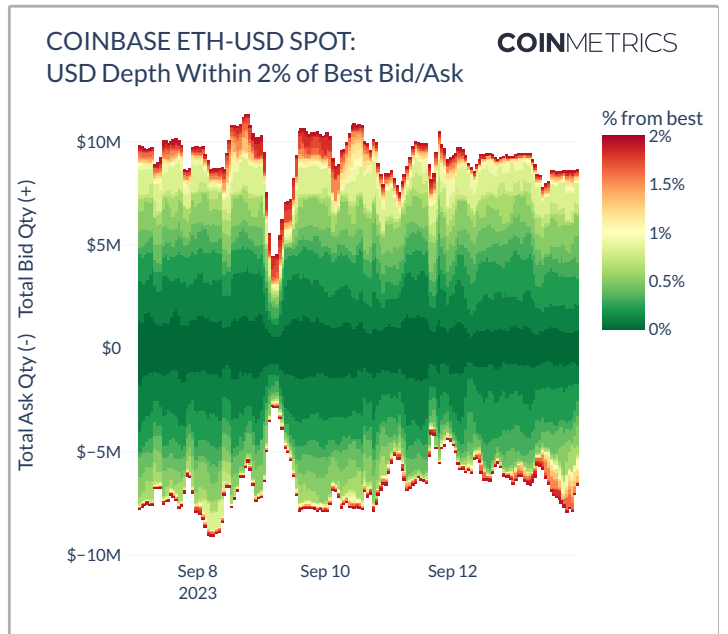
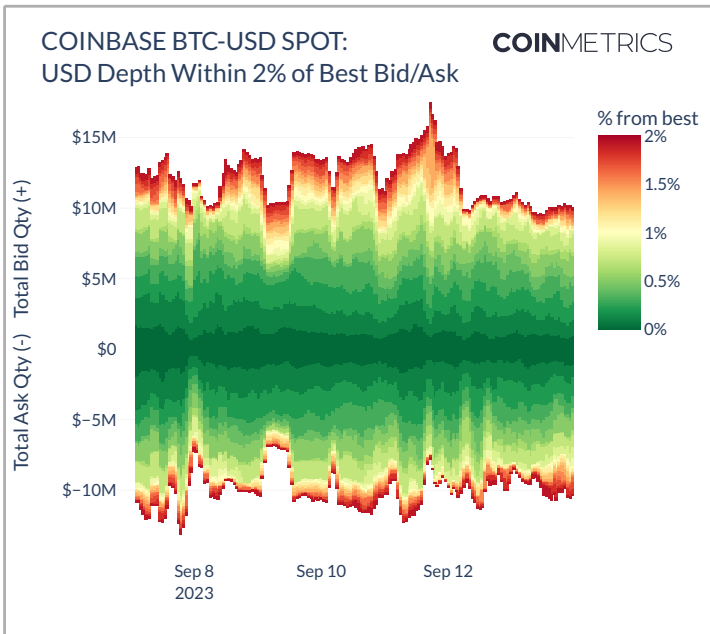
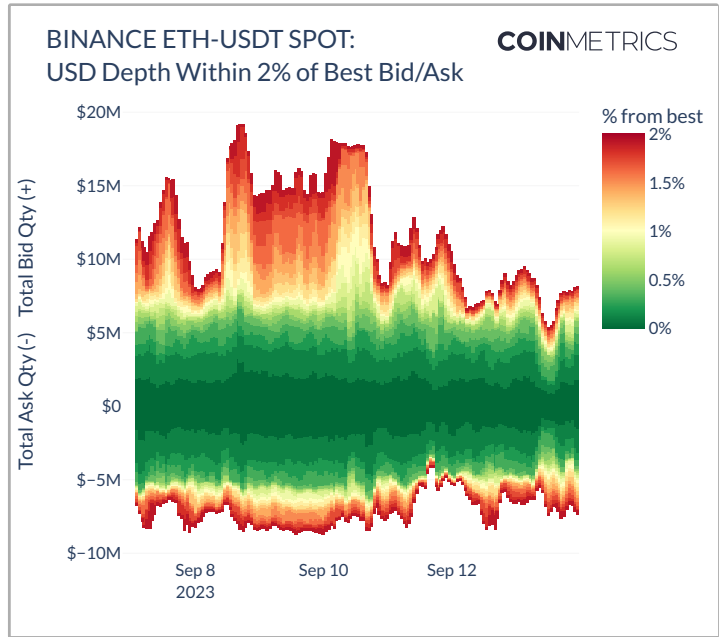
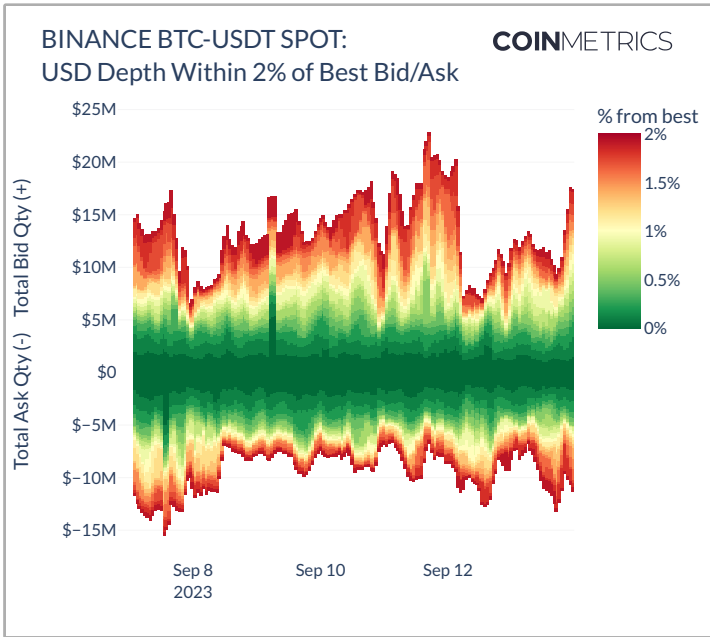
KRAKEN DAILY USD SPOT VOLUME 3M (2023-09-13) COINMETRICS



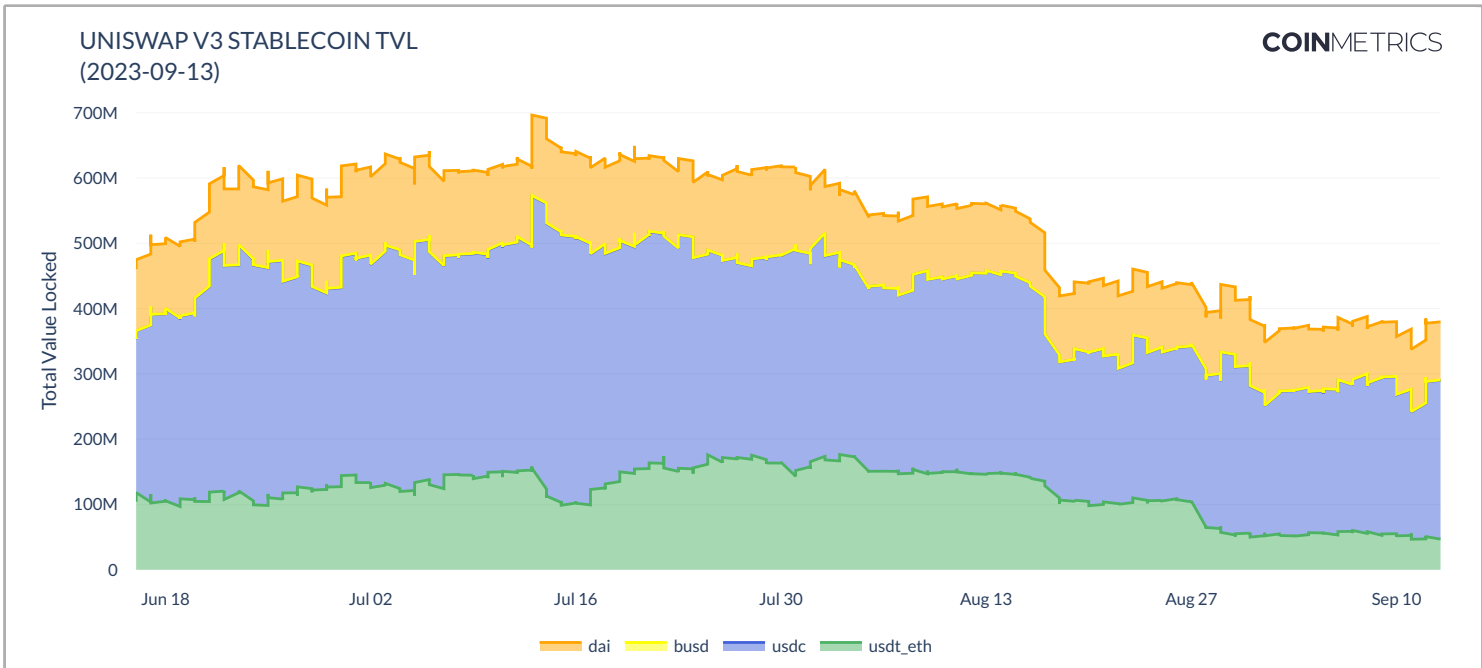
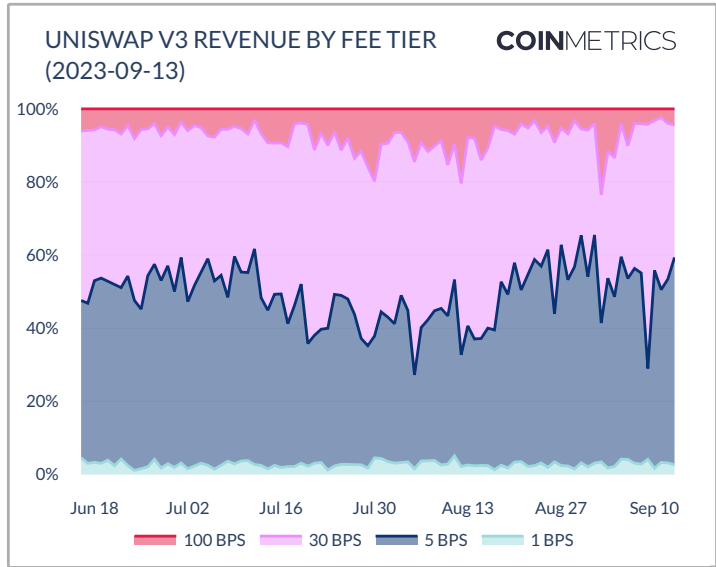
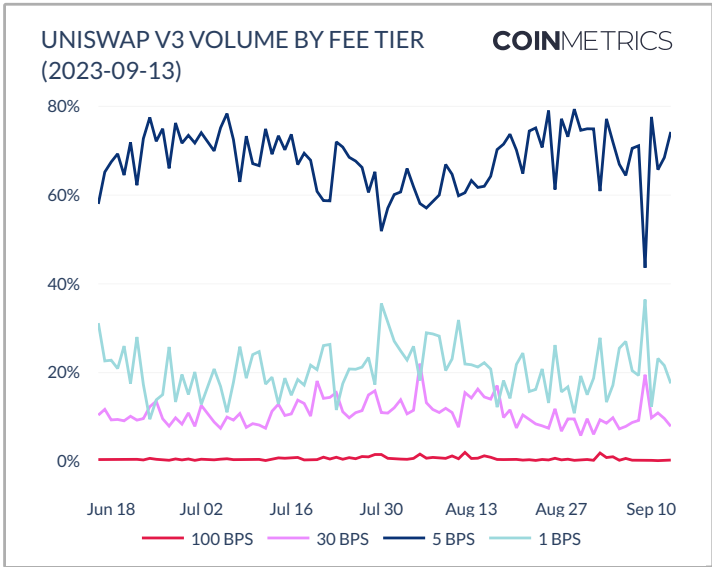
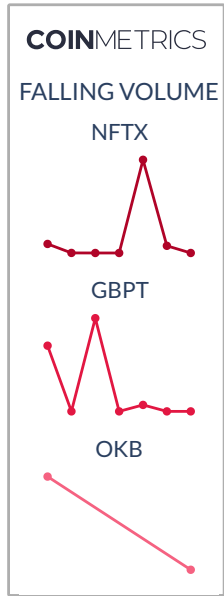
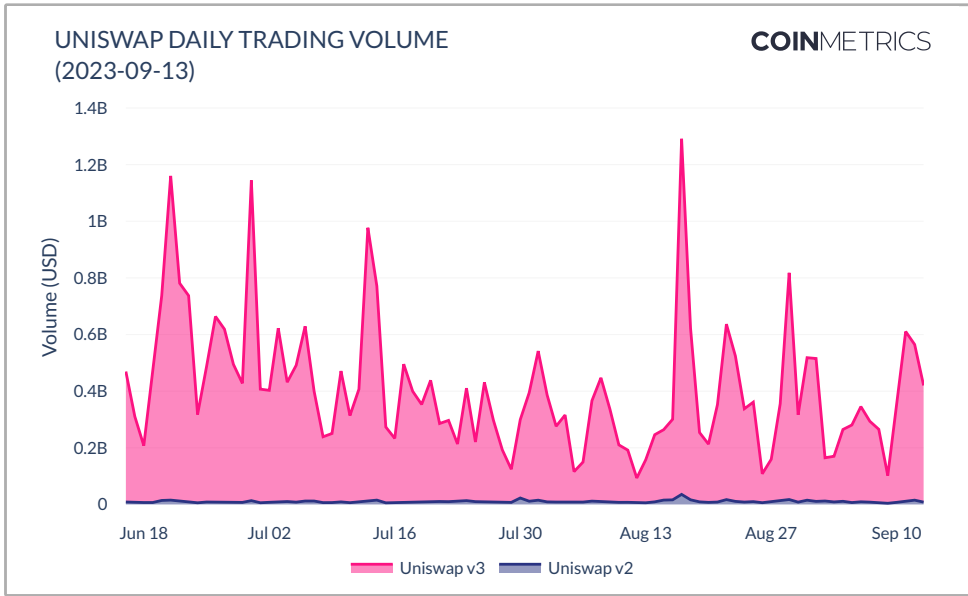
KRAKEN SPOT VOLUME, % BY ASSET 3M (2023-09-13) COINMETRICS



ORDER BOOK DEPTH



DEX DIGEST



Note: DEX metrics currently capture a subset of the top liquidity pools on the Ethereum-based instantiation of each protocol.

DEFI BALANCE SHEETS

LENDING PROTOCOL TVL (USD) 1Y (2023-09-13)

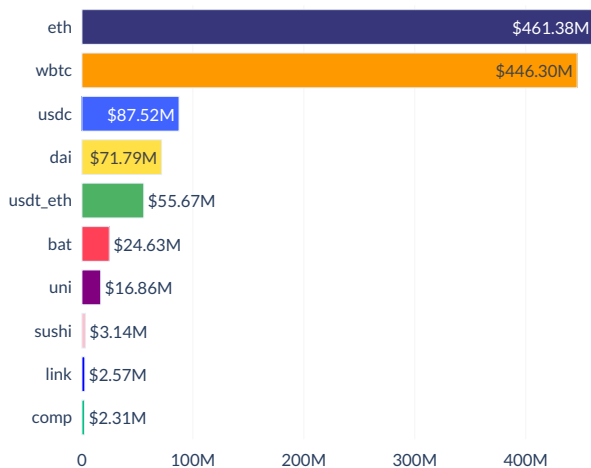
COINMETRICS



COMPOUND V2 BALANCE SHEET

PROTOCOL HEALTH RATIOS	VALUE	7D CHANGE
CURRENT RATIO	0.698686	0.79%
DEBT TO ASSETS RATIO	0.973291	-0.01%
PROTOCOL UTILIZATION RATIO	0.328757	-1.62%
LIQUID SUPPLY RATIO	0.698686	0.79%
ASSETS AND LIABILITIES	VALUE	7D CHANGE
ASSETS TOTAL USD	\$1,729M	-0.12%
ASSETS TOTAL COUNT	19	0.0%
LIABILITIES TOTAL USD	\$1,683M	-0.13%
LIABILITIES TOTAL COUNT	19	0.0%
LOANS LENT TOTAL USD	\$553M	-1.75%
TVL TOTAL USD	\$1,176M	0.66%
NET WORKING CAPITAL USD	-\$507M	-1.92%

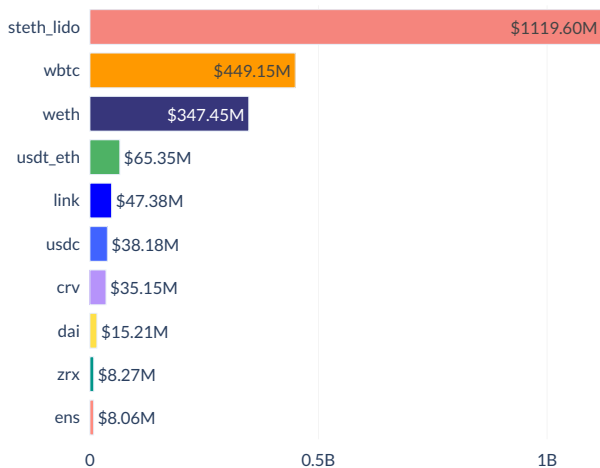
TOP 10 ASSETS BY TOTAL VALUE LOCKED (USD)



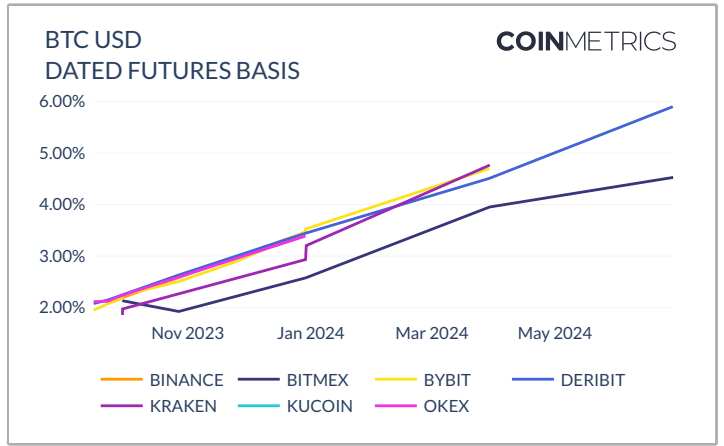
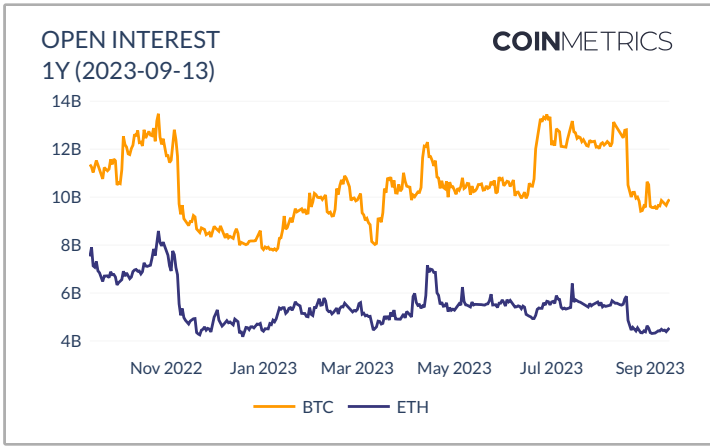
AAVE V2 BALANCE SHEET

PROTOCOL HEALTH RATIOS	VALUE	7D CHANGE
CURRENT RATIO	0.661394	-0.45%
DEBT TO ASSETS RATIO	1.000129	0.0%
PROTOCOL UTILIZATION RATIO	0.338479	0.89%
LIQUID SUPPLY RATIO	0.661394	-0.45%
ASSETS AND LIABILITIES	VALUE	7D CHANGE
ASSETS TOTAL USD	\$3,265M	-1.74%
ASSETS TOTAL COUNT	52	0.0%
LIABILITIES TOTAL USD	\$3,265M	-1.74%
LIABILITIES TOTAL COUNT	52	0.0%
LOANS LENT TOTAL USD	\$1,105M	-0.87%
TVL TOTAL USD	\$2,160M	-2.19%
NET WORKING CAPITAL USD	-\$1,106M	-0.87%

TOP 10 ASSETS BY TOTAL VALUE LOCKED (USD)



FUTURES FEED



OPEN INTEREST

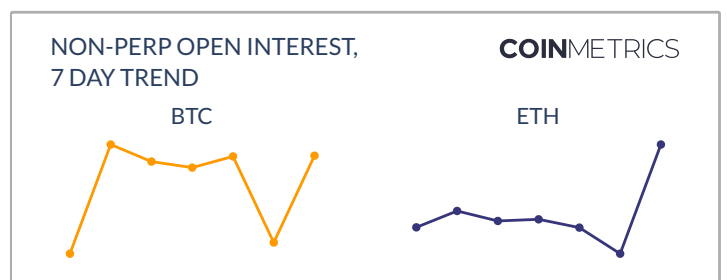
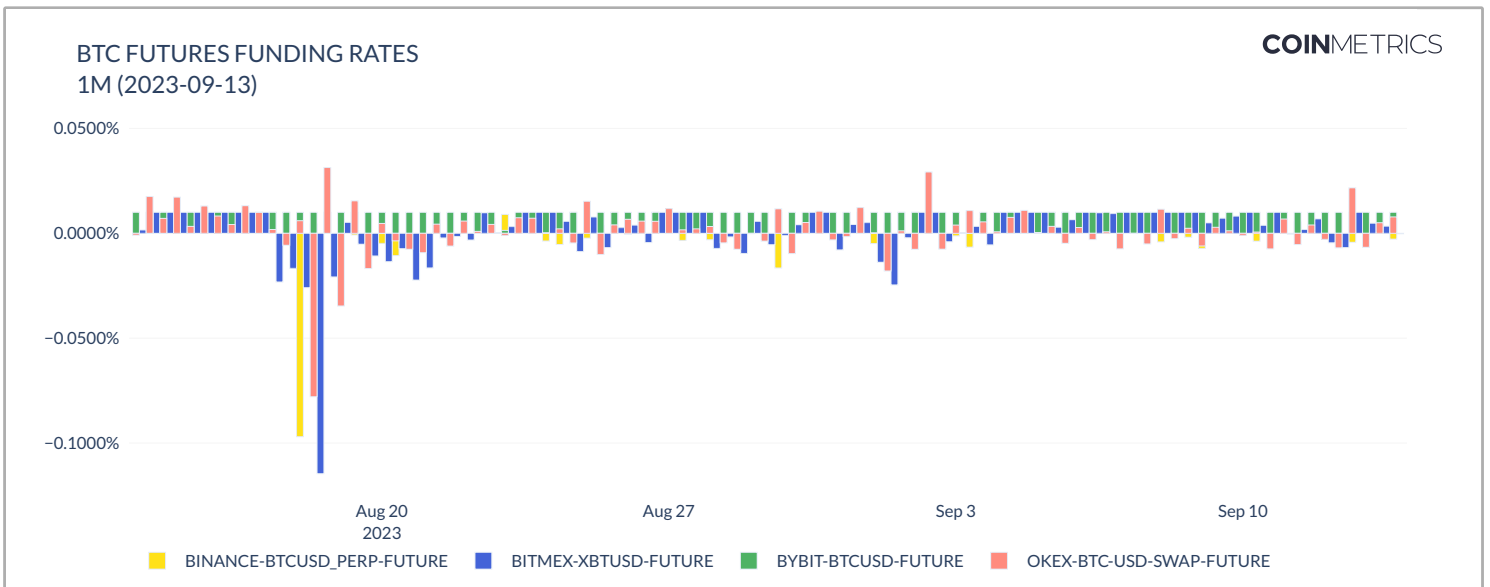
Sum of all reported open interest from futures markets in USD

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+2.87%	9,777,900,059	9,909,931,246	9,633,411,521
ETH	+2.93%	4,456,247,059	4,543,852,822	4,386,425,191
XRP	-8.37%	326,725,011	340,398,271	301,374,501
ADA	-1.01%	85,796,339	88,584,009	83,340,375
LINK	-14.97%	93,515,083	99,699,905	84,776,267
CRO	+40.08%	4,644,563	5,237,854	3,739,244
LTC	-4.18%	202,863,215	207,285,153	196,532,972
UNI	-11.59%	43,675,178	46,943,293	40,595,919
BCH	+15.67%	192,669,578	219,448,923	179,492,695

FUTURES VOLUME

USD value of all reported futures volume

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+15.03%	22,789,950,300	44,343,122,795	5,088,147,258
ETH	+22.73%	9,232,804,040	15,798,586,166	1,839,571,134
XRP	+60.25%	892,491,523	1,803,454,680	258,350,752
ADA	+15.00%	191,098,841	281,133,785	77,675,884
LINK	-21.87%	244,043,067	350,109,962	105,836,870
CRO	-82.96%	8,334,315	14,076,942	1,092,987
LTC	+77.51%	451,100,966	739,000,384	126,411,552
UNI	-13.10%	68,731,372	97,541,232	28,974,472
BCH	+245.15%	702,924,596	1,641,004,068	244,005,479



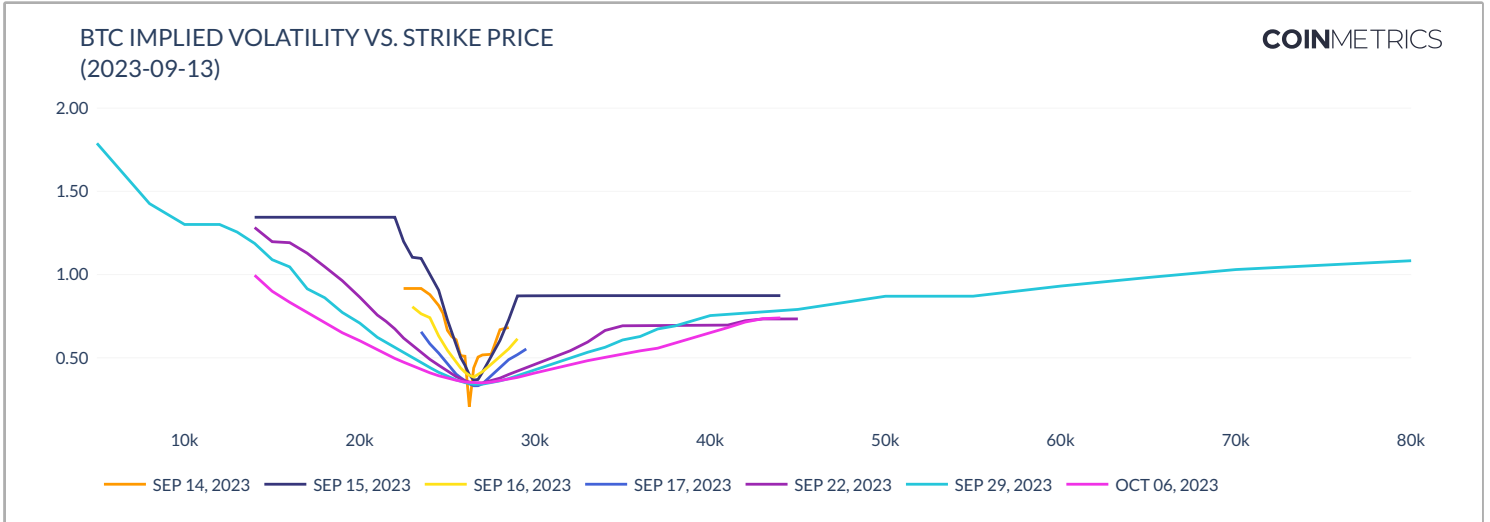
OPTIONS SNAPSHOT

BTC OPEN INTEREST

TOTAL	\$8,056,902,693
CALLS	\$5,306,539,008
PUTS	\$2,750,363,686

ETH OPEN INTEREST

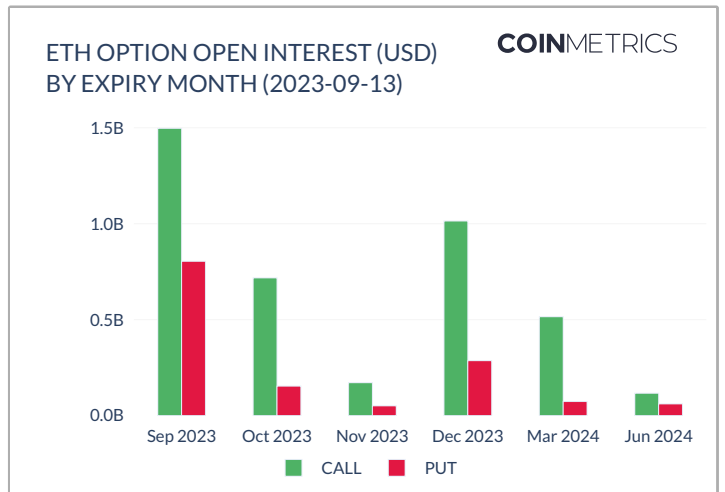
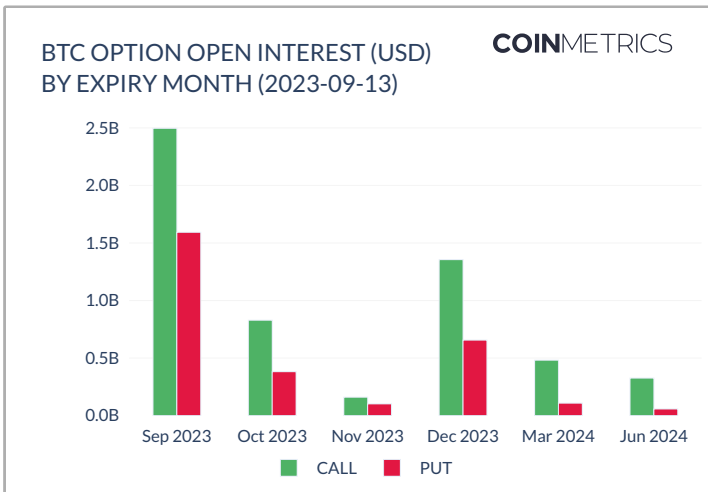
TOTAL	\$5,209,147,160
CALLS	\$3,857,491,108
PUTS	\$1,351,656,051



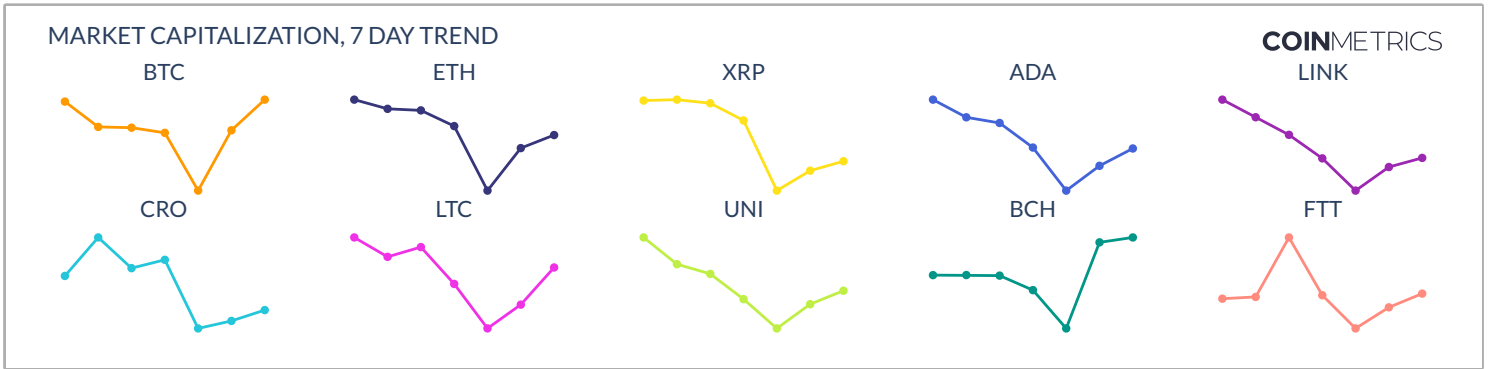
AT THE MONEY OPTIONS

Market greeks, implied volatility, and mark contract prices for BTC options at or near strike price.

CALLS							PUTS							
VEGA	THETA	RHO	DELTA	GAMMA	IV	MARK	SYMBOL	MARK	IV	GAMMA	DELTA	RHO	THETA	VEGA
6.2309	-41.54897	1.65555	0.8157	0.00028	0.6652	0.0468	BTC-14SEP23-25000	0.0001	0.6652	0.00028	-0.1843	-0.39877	-41.54897	6.2309
7.67983	-51.2107	1.49779	0.73391	0.00035	0.614	0.0374	BTC-14SEP23-25250	0.0001	0.614	0.00035	-0.26609	-0.57707	-51.2107	7.67983
8.7707	-58.48487	1.30809	0.63794	0.0004	0.4559	0.0278	BTC-14SEP23-25500	0.0001	0.4559	0.0004	-0.36206	-0.78732	-58.48487	8.7707
9.30162	-62.02513	1.09817	0.53343	0.00042	0.3891	0.0185	BTC-14SEP23-25750	0.0003	0.3891	0.00042	-0.46657	-1.01778	-62.02513	9.30162
22.823	-28.52966	9.73646	0.69498	0.0001	0.5693	0.048	BTC-15SEP23-25000	0.0013	0.5693	0.0001	-0.30502	-5.33155	-28.52966	22.823
4.18112	-55.65696	1.07697	0.85742	0.00025	0.4985	0.0386	BTC-15SEP23-25250	0.0015	0.4985	0.00025	-0.14258	-0.19082	-55.65696	4.18112
24.3325	-30.41658	9.07266	0.64183	0.0001	0.4387	0.0296	BTC-15SEP23-25500	0.002	0.4387	0.0001	-0.35817	-6.29671	-30.41658	24.3325
6.18967	-68.3598	0.92502	0.72512	0.00044	0.3756	0.0208	BTC-15SEP23-25750	0.0027	0.3756	0.00044	-0.27488	-0.36787	-68.3598	6.18967
5.83468	-38.91587	1.69504	0.83448	0.00027	0.4645	0.0485	BTC-16SEP23-25000	0.0017	0.4645	0.00027	-0.16552	-0.3588	-38.91587	5.83468
7.33699	-48.93596	1.54706	0.75728	0.00033	0.4274	0.0395	BTC-16SEP23-25250	0.0023	0.4274	0.00033	-0.24272	-0.52732	-48.93596	7.33699



MARKET CAPITALIZATION



MARKET CAP

USD value of current supply. Also referred to as market capitalization.

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+0.09%	503,916,344,780	511,016,547,222	489,697,629,061
ETH	-2.26%	198,563,465,877	202,660,673,703	190,867,137,568
XRP	-4.10%	49,269,149,162	50,483,291,927	47,377,268,500
ADA	-3.31%	8,596,849,636	8,849,733,571	8,303,681,758
LINK	-5.68%	6,090,210,178	6,381,786,008	5,815,996,748
CRO	-2.06%	5,126,522,814	5,277,176,349	4,993,897,122
LTC	-2.53%	4,534,737,346	4,683,256,647	4,324,621,784
UNI	-4.89%	4,276,420,707	4,473,584,984	4,099,750,008
BCH	+3.43%	3,767,520,204	3,896,020,741	3,583,737,573
FTT	+0.87%	348,615,852	381,831,950	328,361,800

FREE FLOAT MARKET CAP

The sum USD value of the free float supply.

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+0.07%	354,154,982,753	359,109,872,394	344,128,809,830
ETH	-2.42%	176,779,441,232	180,532,762,254	169,879,463,525
XRP	-3.90%	23,091,329,198	23,639,625,410	22,232,038,449
ADA	-3.26%	7,654,718,772	7,878,478,370	7,394,532,683
LINK	-5.69%	3,207,926,658	3,361,692,170	3,063,377,237
CRO	-2.06%	559,592,075	576,037,811	545,113,984
LTC	-2.55%	3,894,410,911	4,022,339,692	3,713,918,467
UNI	-4.88%	1,060,717,134	1,109,604,013	1,016,885,675
BCH	+3.44%	2,541,259,025	2,628,067,696	2,417,198,633
FTT	+0.87%	348,615,852	381,831,950	328,361,800

REALIZED CAP

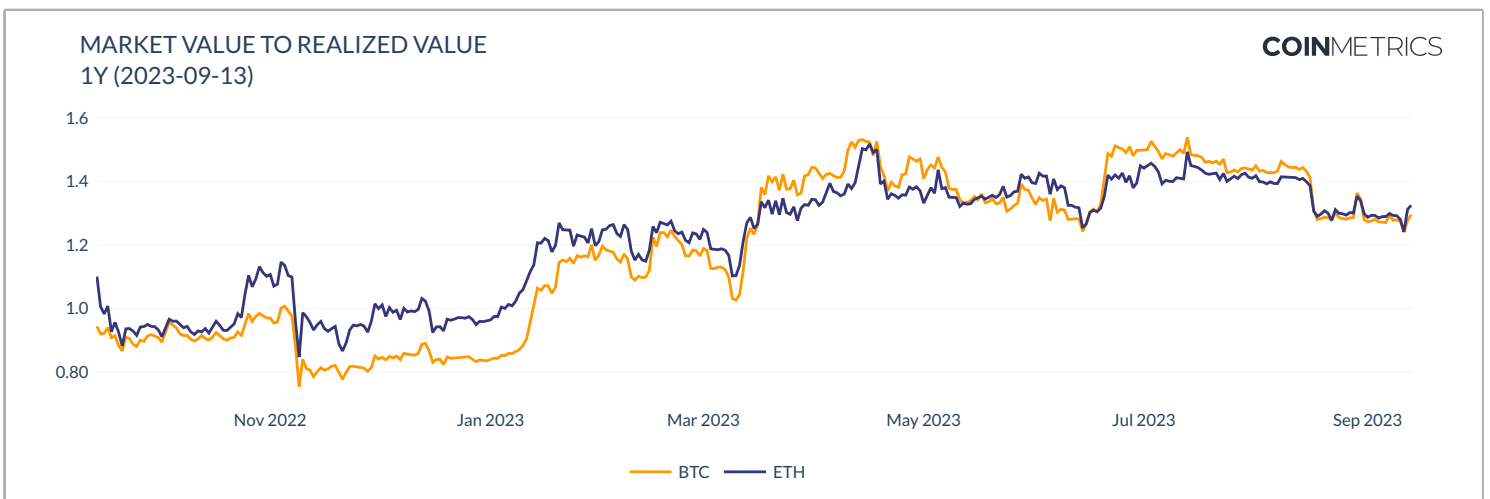
USD value for all native units based on the USD closing price on the day that a unit last moved.

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	-0.05%	394,704,398,830	394,814,606,602	394,595,183,275
ETH	-4.14%	153,762,698,483	156,018,395,385	149,556,019,440
XRP	-0.22%	51,899,023,972	51,959,017,563	51,810,864,500
ADA	-0.25%	15,812,346,742	15,838,569,936	15,792,249,142
LINK	-0.22%	8,187,051,346	8,201,330,824	8,165,857,264
CRO	+0.01%	22,453,129,103	22,453,943,217	22,452,263,943
LTC	-0.39%	6,801,702,770	6,815,097,280	6,788,660,820
UNI	-0.24%	8,331,687,786	8,345,880,046	8,321,335,972
BCH	-0.00%	4,681,826,652	4,682,293,822	4,680,409,200
FTT	-0.01%	841,642,520	842,436,636	841,167,775

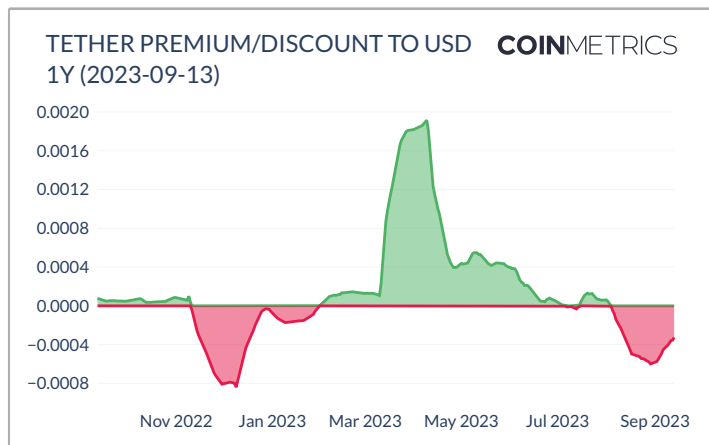
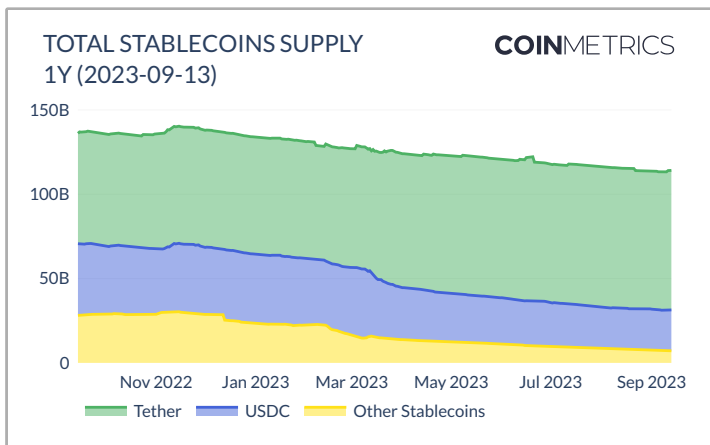
MARKET VALUE TO REALIZED VALUE

The ratio of a cryptoasset's market cap (aka market value) to realized cap (aka realized value).

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+0.14%	1.28	1.29	1.24
ETH	+1.96%	1.29	1.32	1.24
XRP	-3.90%	0.95	0.97	0.91
ADA	-3.07%	0.54	0.56	0.53
LINK	-5.47%	0.74	0.78	0.71
CRO	-2.07%	0.23	0.24	0.22
LTC	-2.15%	0.67	0.69	0.64
UNI	-4.66%	0.51	0.54	0.49
BCH	+3.44%	0.80	0.83	0.77
FTT	+0.88%	0.41	0.45	0.39



STABLECOINS REPORT



MARKET CAPITALIZATION

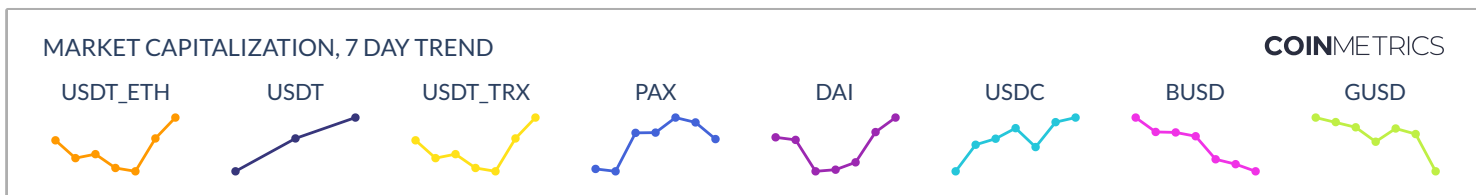
USD value of current supply

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USD_T_ETH	+0.03%	39,019,556,059	39,034,815,851	39,009,292,100
USDT	+0.07%	380,550,139	888,219,091	887,638,310
USD_T_TRX	+0.03%	42,824,030,758	42,840,778,406	42,812,766,045
PAX	+3.14%	513,623,746	525,771,838	497,529,427
DAI	+0.11%	3,835,635,762	3,842,196,772	3,830,284,435
USDC	+1.00%	24,132,016,530	24,225,645,770	23,985,624,481
BUSD	-3.96%	2,566,650,790	2,619,018,710	2,515,302,253
GUSD	-0.24%	307,317,930	307,551,719	306,816,183

TRANSFER VALUE, ADJUSTED

USD value of the sum native units transferred removing noise

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USD_T_ETH	+5.10%	2,360,654,636	3,312,567,896	776,729,047
USDT	-95.90%	283,948	1,510,916	18,757
USD_T_TRX	+2.72%	8,593,478,217	10,450,135,196	4,570,656,521
PAX	+535.58%	29,259,088	68,175,118	120,506
DAI	-54.95%	978,118,397	1,528,246,196	387,679,801
USDC	+7.97%	3,309,684,713	5,035,909,426	1,408,089,653
BUSD	-60.53%	57,037,083	143,294,560	12,439,587
GUSD	+66.98%	3,926,459	12,859,277	19,770



TRANSACTION COUNT

Count of transactions

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USD_T_ETH	-1.67%	95,972	107,988	73,926
USDT	+4.17%	11	28	24
USD_T_TRX	-4.56%	1,937,791	2,082,673	1,658,296
PAX	+2.21%	97	153	40
DAI	+2.79%	3,685	4,888	2,721
USDC	+2.97%	31,530	38,414	22,751
BUSD	-20.05%	712	850	602
GUSD	+52.08%	131	219	34

MEDIAN TRANSFER VALUE

Median USD value transferred per transfer between addresses

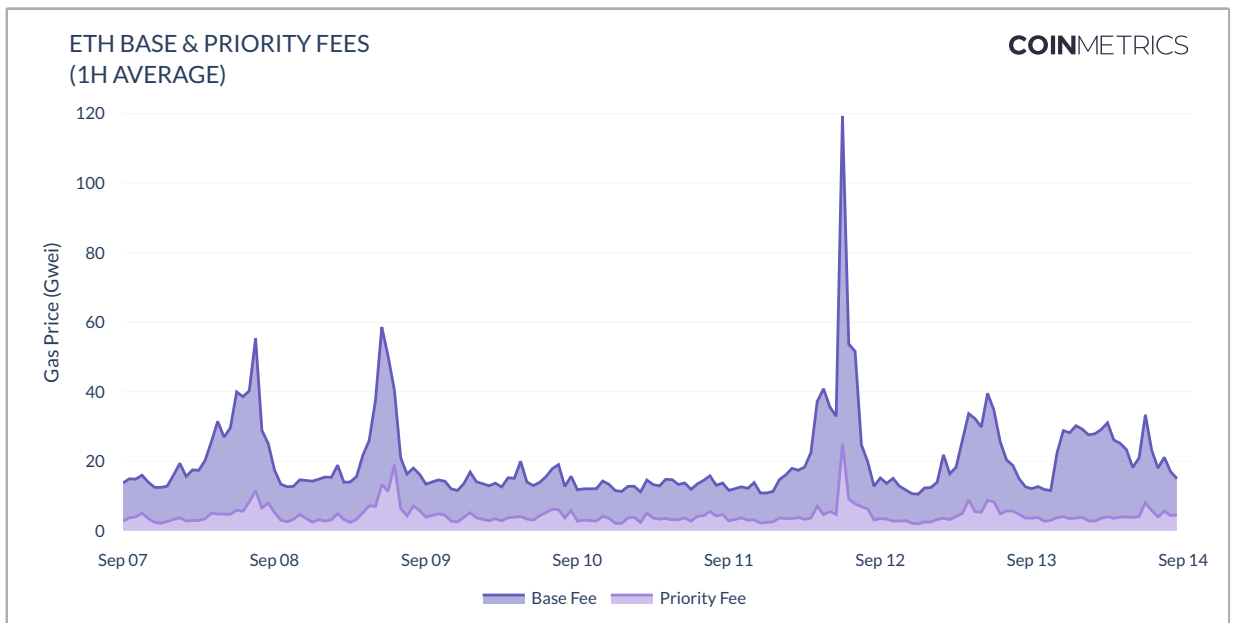
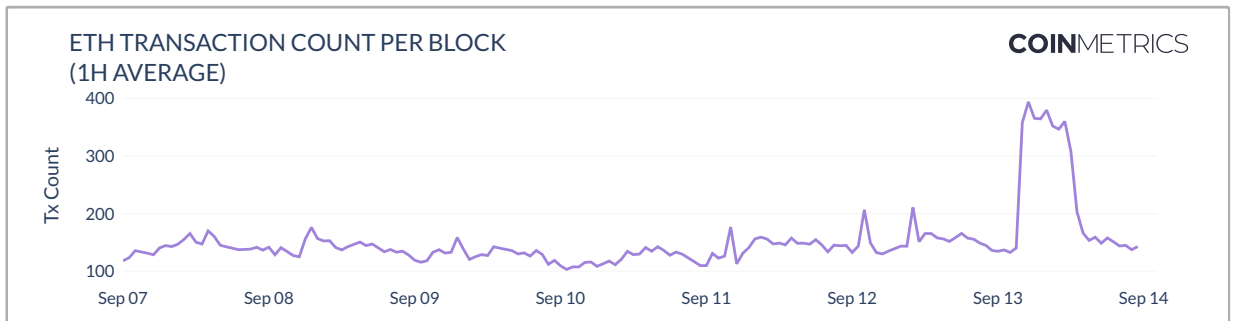
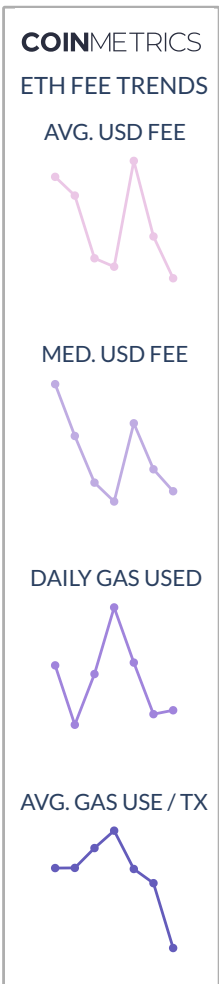
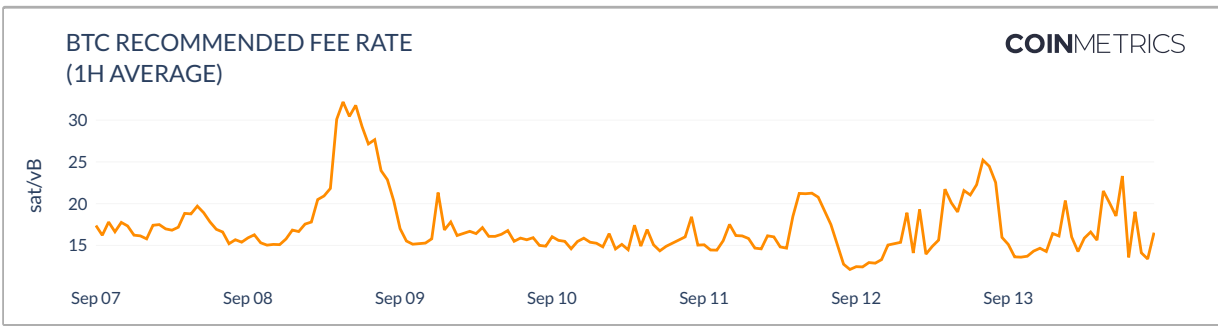
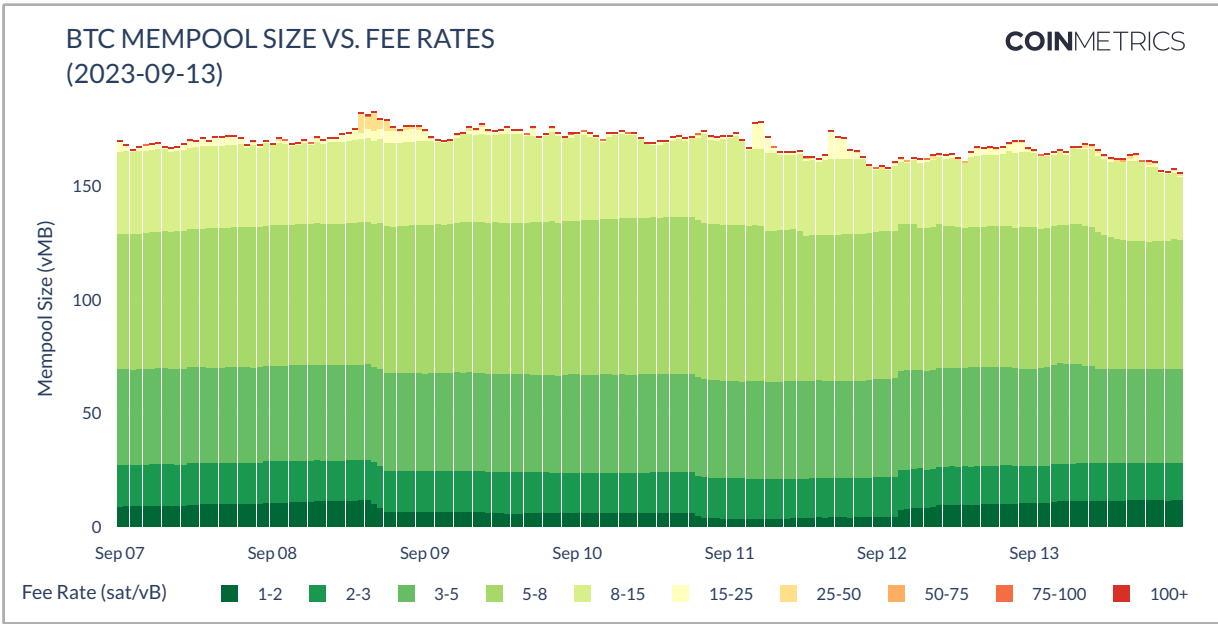
ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USD_T_ETH	-3.24%	543	675	353
USDT	-61.04%	334	1,272	496
USD_T_TRX	-1.93%	110	131	100
PAX	+391.84%	4,020	14,115	131
DAI	+90.85%	1,464	2,828	546
USDC	+0.71%	910	1,326	499
BUSD	-64.21%	336	699	193
GUSD	+657.29%	5,598	24,929	140

VELOCITY

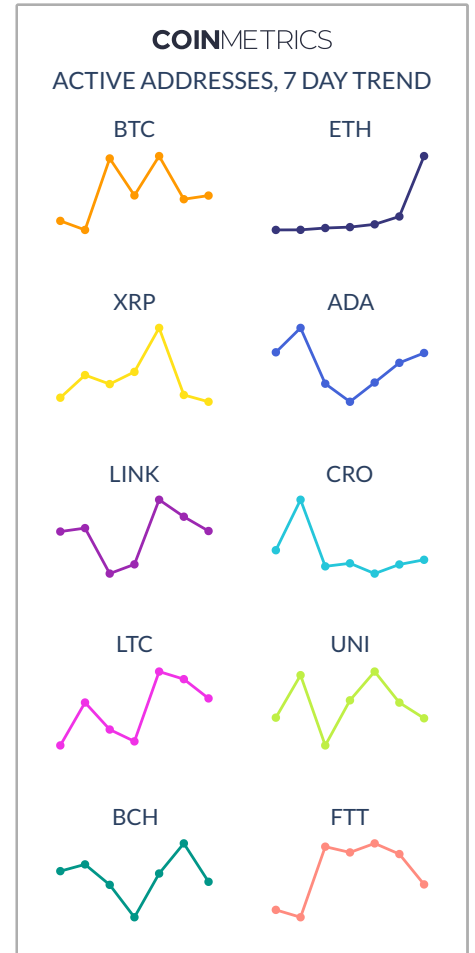
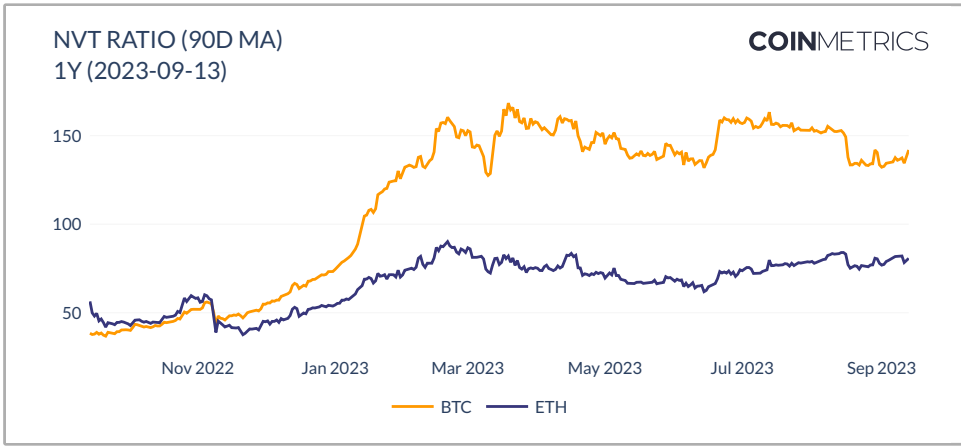
Number of times that an average native unit among the active supply has been transferred in the past 1 year

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USD_T_ETH	+0.31%	36.72	36.81	36.62
USDT	-0.19%	6.47	15.11	15.07
USD_T_TRX	+0.47%	72.85	73.05	72.70
PAX	-2.66%	34.92	35.94	34.07
DAI	-2.87%	191.64	195.55	187.01
USDC	-2.57%	118.38	119.90	116.83
BUSD	+5.47%	109.76	112.89	107.04
GUSD	-3.34%	17.32	17.70	17.10

FEE MARKET



NETWORK DATA FUNDAMENTALS



ACTIVE ADDRESSES

Count of unique addresses that were active in the network

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+4.56%	1,052,599	1,120,614	986,937
ETH	+152.34%	585,126	1,146,470	454,334
XRP	-2.99%	24,479	32,620	20,865
ADA	-0.35%	32,539	39,256	26,331
LINK	+0.36%	2,196	2,730	1,611
CRO	-13.02%	299	531	215
LTC	+7.22%	214,634	226,559	203,473
UNI	-0.33%	653	754	528
BCH	-15.61%	91,077	139,322	32,080
FTT	+47.69%	110	146	56

FREE FLOAT SUPPLY

Sum of native units readily available to trade in open markets

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+0.01%	13,691,833	13,692,443	13,691,198
ETH	-0.09%	109,648,450	109,674,266	109,574,293
XRP	+0.21%	46,863,411,546	46,920,077,071	46,820,662,127
ADA	+0.10%	30,616,604,243	30,636,051,197	30,604,398,146
LINK	-0.01%	526,734,324	526,763,537	526,709,194
CRO	-0.00%	10,915,626,001	10,915,684,775	10,915,598,195
LTC	+0.01%	63,241,437	63,244,768	63,237,875
UNI	+0.01%	248,038,564	248,057,216	248,034,634
BCH	+0.04%	13,153,380	13,155,913	13,151,165
FTT	+0.00%	328,895,104	328,895,104	328,895,104

TRANSACTION COUNT

Count of transactions

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	-5.22%	506,462	599,142	408,954
ETH	+60.05%	1,081,395	1,627,860	866,548
XRP	-4.67%	1,011,151	1,081,491	954,234
ADA	-16.12%	49,455	59,369	41,823
LINK	+26.55%	2,875	3,850	1,859
CRO	-9.80%	330	518	237
LTC	-1.40%	108,244	118,077	103,663
UNI	+4.23%	758	984	563
BCH	+30.42%	93,450	179,676	13,512
FTT	+195.83%	198	309	69

TRANSFER VALUE, ADJUSTED

USD value of the sum native units transferred removing noise

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	-10.82%	2,767,217,348	3,604,594,618	1,772,475,348
ETH	+11.31%	2,829,674,679	7,104,180,481	1,083,455,272
XRP	-39.32%	451,620,242	640,787,684	333,902,130
ADA	-21.78%	3,634,707,081	4,472,072,179	3,056,485,236
LINK	+13.04%	28,273,487	57,761,917	9,894,030
CRO	-86.47%	987,555	3,550,719	368,878
LTC	+32.22%	60,820,520	81,744,067	49,170,495
UNI	+38.90%	16,359,882	41,643,573	2,963,315
BCH	+45.30%	18,601,906	30,892,408	7,413,271
FTT	+75.50%	1,475,986	2,511,537	615,625

ADDRESSES ≥ \$1

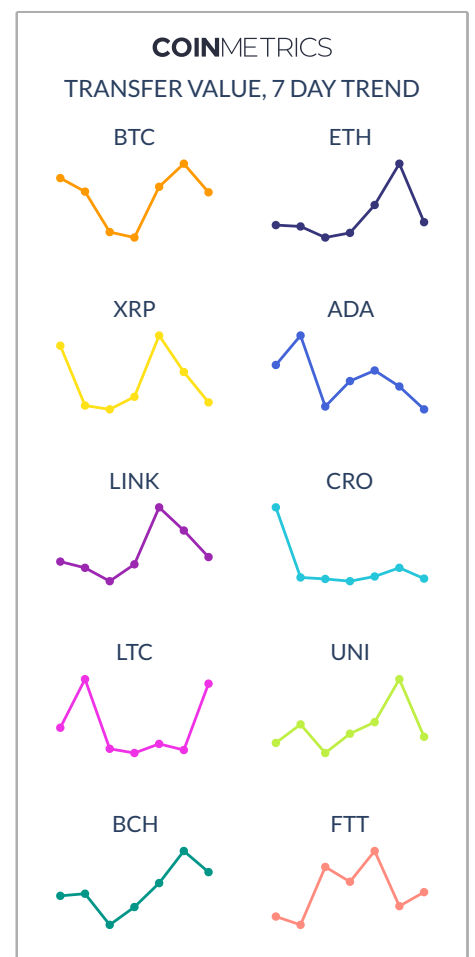
Count of addresses holding at least \$1 worth of native units

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+0.06%	40,918,857	40,993,186	40,812,004
ETH	-0.79%	58,755,164	59,110,488	58,104,085
XRP	+0.13%	4,782,881	4,785,948	4,779,859
ADA	-0.49%	3,525,030	3,537,537	3,511,920
LINK	+0.01%	530,469	530,941	529,962
CRO	-0.17%	149,242	149,509	148,646
LTC	-0.77%	2,287,591	2,299,590	2,272,425
UNI	-0.11%	282,948	283,410	282,485
BCH	+0.64%	4,344,942	4,374,317	4,303,232
FTT	+0.18%	21,389	21,602	21,069

ADDRESSES ≥ \$1M

Count of addresses holding at least \$1M worth of native units

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+0.04%	70,423	70,740	69,790
ETH	-2.31%	9,383	9,555	9,116
XRP	-6.73%	1,114	1,159	1,066
ADA	-2.58%	757	776	731
LINK	-6.40%	356	375	342
CRO	+0.00%	48	48	48
LTC	-2.16%	404	417	391
UNI	-1.37%	286	293	275
BCH	+2.38%	295	301	289
FTT	+7.69%	13	14	12



DATA EXPLAINER (P.1)

ESTIMATED MARKET CAPITALIZATION (MARKET CAP)

Estimated Market Capitalization (Market Cap) is an asset's reported supply multiplied by its price. In this version of the metric, circulating supply is reported by the projects or other derived sources.

PRICE

Closing Price (4PM), High Price, Low Price, % Change in Price for each asset for the previous month and the previous 52-week period. Price represents Coin Metrics' Reference Rate, which is calculated using an independent methodology robust to manipulation. [More information](#) on Coin Metrics' Reference Rates.

DIGITAL ASSET TAXONOMY

Asset classes, sectors, and sub-sectors are derived from datonomy™, a digital asset classification system created by Coin Metrics, Goldman Sachs, and MSCI, offering a consistent, standardized way for investors to analyze the digital assets ecosystem.

Class is the top level of the classification system, describing the fundamental purpose of an asset.

Sector describes specialization of an asset within a class.

Sub-Sector delineates the asset within a sector by the specific product, service, or function it provides to users.

datonomy™ offers a new level of transparency into how the market is moving and serves as a powerful foundation for portfolio performance measurement, risk management, reporting, & investment strategy. [More info](#) on datonomy.

SECTOR INDEXES

The Total Market Series is a suite of indexes measuring segments of the digital assets ecosystem as defined by datonomy™, allowing investors to passively track the growth of sectors and sub-sectors. The full list of index offerings is outlined below:

- **CMBIAUE:** CMBI Application Utilities Sector Even
- **CMBIBUE:** CMBI Blockchain Utilities Sector Even
- **CMBIBSE:** CMBI Business Services Sector Even
- **CMBIDFIE:** CMBI Decentralized Finance Sector Even
- **CMBIITE:** CMBI Information Technology Sector Even
- **CMBIIFE:** CMBI Intermediated Finance Sector Even
- **CMBIMSE:** CMBI Media Services Sector Even
- **CMBIMTAE:** CMBI Metaverse Sector Even
- **CMBISCP:** CMBI Smart Contracts Platform Sector Even
- **CMBISCE:** CMBI Specialized Coins Sector Even
- **CMBIVTCE:** CMBI Value Transfer Coins Sector Even
- **CMBIDEXE:** CMBI Decentralized Exchanges Sub-Sector Even
- **CMBINSE:** CMBI Network Scaling Sub-Sector Even
- **CMBINFTE:** CMBI NFT Ecosystem Sub-Sector Even

CMBI SINGLE ASSET SERIES

The CMBI Single Asset Series provide the cryptoasset community, investors and asset managers with publicly available and investable benchmarks that reliably and accurately track the price of a single cryptoasset, through sourcing market prices from numerous global liquidity venues. [More information](#) on Coin Metrics Indexes.

CMBI BITCOIN

Daily level for Coin Metrics Bletchley Index (CMBI) Bitcoin for the previous month. CMBI Bitcoin tracks the price and performance of Bitcoin by sourcing BTC/USD market prices from numerous global liquidity venues. As of 9/10/2023 constituent markets in the CMBI Bitcoin were Binance.US, Bitstamp, Bittrex, Coinbase, Gemini, itBit and Kraken. [More information](#) on Coin Metrics Indexes.

CMBI ETHEREUM

Daily level for CMBI Ethereum for the previous month. CMBI Ethereum tracks the price of Ethereum by sourcing ETH/USD market prices from numerous global liquidity venues. As of 9/10/2023 constituent markets in the CMBI Ethereum were Binance.US, Bitstamp, Bittrex, Coinbase, Gemini, itBit and Kraken. [More information](#) on Coin Metrics Indexes.

CMBI MULTI ASSET SERIES

The CMBI Multi Asset Series provide the cryptoasset community, investors and asset managers with publicly available and investable benchmarks that reliably and accurately track the value of cryptoasset markets. [More information](#) on Coin Metrics Indexes.

CMBI 10

Daily level for CMBI 10 for the previous month. The CMBI 10 is designed to measure the performance an investor would expect from investing in a diversified basket of cryptoassets weighted by their free float market capitalization. The 10 largest cryptoassets, defined by an asset's expected 10 year future market capitalization, are selected as the index constituents. [More information](#) on Coin Metrics Indexes.

CMBI 10 MOMENTUM

Daily level for CMBI 10 Momentum for the previous month. The CMBI 10 Momentum is designed to measure the performance of a short term momentum factor applied to a basket of the 10 largest cryptoassets. The 10 largest cryptoassets, defined by an asset's expected 10 year future market capitalization, are selected as the index constituents. [More information](#) on Coin Metrics Indexes.

DATA EXPLAINER (P.2)

TRADING DIARY

Total Volume, which is the total traded volume for the previous week for the cryptoassets under Coin Metrics Reference Rate Coverage.

Adv. Volume is the total traded volume for the previous week for all cryptoassets under Coin Metrics Reference Rate Coverage that had closing prices higher than their opening prices for the week.

Decl. Volume is the total traded volume for the previous week for all cryptoassets under Coin Metrics Reference Rate Coverage that had closing prices lower than their opening prices for the week.

Advances are the number of cryptoassets that had closing prices higher than their opening price for the week.

Declines are the number of cryptoassets that had closing prices lower than their opening price for the week.

The ratio of advances to declines can be used to determine the breadth of market direction. For example, higher advance/decline ratios indicate that advancing market direction is driven by a broader set of cryptoassets.

EXCHANGE SPOT VOLUME MARKET SHARE

Market share of exchange spot volume for the previous week for the Markets covered by Coin Metrics.

BASE ASSET SPOT VOLUME MARKET SHARE

Market share of base asset volume for the previous week for the top 25 cryptoassets based on volume under Coin Metrics Reference Rate Coverage.

LIQUIDATIONS

Exchanges which offer futures products have a liquidation system that will attempt to close a market participant's position before the point at which the market participant begins to owe more than the available amount of collateral in their account. If a short trade enters liquidation, the exchange will enter a 'buy' order to forcibly close out the position. Vice versa, if a long trade enters liquidation, the exchange will enter a 'sell' order to forcibly close out the position.

% PRICE CHANGE

Percentage change in price over the previous week for cryptoasset gainers and losers in Coin Metrics' Reference Rate and Market Cap coverage universe. Coin Metrics' price/Reference Rate is calculated using an independent methodology robust to manipulation. [More information](#) on Coin Metrics' Reference Rates.

REPORTED EXCHANGE VOLUME

Our exchange reported volume metric is an aggregation of the daily reported volume from an exchange in units of U.S. dollars.

SPOT VOLUME SHARE, % BY ASSET

Exchange spot volume asset share is derived using Coin Metrics market candles. Candles include volume and volume-weighted average price, as well as open, high, low, and close values for each market. Candles are available at various intervals, from 1-minute to 1-day frequency. Candle USD volume is calculated by aggregating the total volume of trades for each base pair in a given window and multiplying by the asset's Coin Metrics Reference Rate.

ORDER BOOK DEPTH

Order book depth (+/-2%) is calculated using Coin Metrics order book snapshots. Coin Metrics stores three types of order book snapshots. One type consists of a snapshot of the top 100 bids and top 100 asks taken once every 10 seconds for major markets. The 2nd type includes all levels where the price is within 10 percent of the midprice taken once every 10 seconds for major markets. The 3rd type consists of a full order book snapshot (every bid and every ask) taken once every hour for all markets that we are collecting order book data for.

DEX REPORTED SPOT VOLUME

Decentralized exchange spot volume is calculated by aggregating the total amount of USD trading volume occurring in major DEX liquidity pools. The subset of liquidity pools where both the base and the quote asset have a Coin Metrics Reference Rate are included.

DEX RISING VOLUME

Decentralized exchange rising volume is calculated by aggregating the total amount of USD trading volume occurring in major DEX liquidity pools and selecting the pools with the largest week-over-week rise in volume. The subset of liquidity pools where both the base and the quote asset have a Coin Metrics Reference Rate are included.

DEX FALLING VOLUME

Decentralized exchange falling volume is calculated by aggregating the total amount of USD trading volume occurring in major DEX liquidity pools and selecting the pools with the largest week-over-week decline in volume. The subset of liquidity pools where both the base and the quote asset have a Coin Metrics Reference Rate are included.

DATA EXPLAINER (P.3)

DEX VOLUME BY FEE TIER

Decentralized exchange volume by fee tier is calculated by aggregating the total amount of swap USD volume that occurred in each liquidity pool, segmented by the different fee tiers of pools available for each pair. Revenue by fee tier is calculated by multiplying the amount of USD volume by the fee tier of the liquidity pool in which the volume occurred. [More information](#) on Coin Metrics DeFi data.

DEX TOTAL VALUE LOCKED (TVL)

Decentralized exchange total value locked is derived by calculating the amount of tokens held in all DEX liquidity pools covered by Coin Metrics. Balance held by each liquidity pool smart contract is retrieved using ATLAS, Coin Metrics' universal blockchain search engine. [More information](#) on Coin Metrics ATLAS.

FUTURES OPEN INTEREST

The reported futures open interest from markets in Coin Metrics' coverage in units of U.S. dollars, aggregated across all futures markets for a particular asset. Covered markets can be found in the Coin Metrics [Data Encyclopedia](#).

FUTURES BASIS

The futures basis is the percent difference between the price of a dated futures contract and the price of its underlying spot market, calculated using the Coin Metrics Reference Rate. In addition to calculating futures basis manually, Coin Metrics also offers annualized [futures basis metrics](#) at the exchange-asset level.

FUTURES VOLUME

The reported futures volume from the markets in Coin Metrics' coverage in units of U.S. dollars, aggregated across all futures markets for a particular asset. Covered markets can be found in the Coin Metrics [Data Encyclopedia](#).

FUNDING RATES

Funding rates are a mechanism that exchanges use to ensure that perpetual futures trade at a price that is close to the price of the underlying spot markets. The funding rate is used to calculate the funding fee which long position holders pay short position holders, or vice versa, as a way to incentivize market participants to take positions that keep perpetual futures prices close to the underlying.

Positive funding rates indicate that the price of a perp contract is higher than mark price, forcing traders with long positions to pay those holding shorts. Inversely, negative funding rates mean that perp prices are below mark price, so those with shorts must pay the longs. Some analysts have noted that persistently positive funding rates tend to precede a downturn, while persistently negative rates can lead to short squeezes.

PERP & NON-PERP OPEN INTEREST

The reported futures open interest from markets in Coin Metrics' coverage in units of U.S. dollars, aggregated across all futures markets for a particular asset and segmented by contract type (perpetual and non-perpetual futures).

A perpetual ("perp") contract is a special type of futures contract, which is an agreement to buy or sell a cryptoassets at a predetermined price at a specified time in the future. Perpetuals do not have an expiry date, so one can hold the position for as long as desired.

OPTIONS OPEN INTEREST

The reported options open interest from markets in Coin Metrics' coverage in units of U.S. dollars. Currently, the open interest displayed is collected from Deribit, the largest crypto options exchange. Open interest is broken down into calls (long positions) and puts (short positions) to highlight prevailing investor sentiment.

OPTIONS IMPLIED VOLATILITY VS. STRIKE PRICE (VOLATILITY SMILE)

Implied volatility represents the market's expectation of future volatility as derived from options prices, calculated using an options pricing model. When this value is input to an options pricing model, that makes the actual options price equal to its theoretical price.

The options implied volatility (IV) vs. strike price visualization (also known as a "volatility smile") is generated by plotting the IV of each options contract with a common expiration date against the corresponding strike prices of each contract. This representation underscores the fact that out-of-the-money (OTM) options must factor in a higher likelihood of extreme, market-moving events when compared to in-the-money (ITM) options, warranting a higher premium to be paid for the IV component of that contract.

OPTIONS GREEKS

Option greeks represent the sensitivity of the price of an options contract with respect to changes in its underlying parameters. Greeks are used in risk management & hedging so that market participants can achieve their desired exposure. Exchanges report the following greeks:

- **Vega:** The 1st derivative of an option's price to the volatility of the underlying asset's price.
- **Theta:** The 1st derivative of an option's price to the passage of time.
- **Rho:** The 1st derivative of an option's price to the risk free interest rate.
- **Delta:** The 1st derivative of an option's price to the underlying asset's price.
- **Gamma:** The 2nd derivative of an option's price to the underlying asset's price.

DATA EXPLAINER (P.4)

MARKET CAPITALIZATION (MARKET CAP)

Market Capitalization (Market Cap) is an asset's on-chain supply (Coin Metrics' Current Supply) multiplied by its price. Current supply is the sum of all native units ever created (i.e., issued) and visible on the ledger.

Market cap is the most commonly used measure of a cryptoasset's total market value. However, market cap can be misleading because it treats each unit of supply equally. Unlike with traditional equities, significant amounts of cryptoassets are permanently lost or go unclaimed, yet are still counted as part of the on-chain supply.

FREE FLOAT MARKET CAP

The sum USD value of the free float supply. Also referred to as free float network value or free float market capitalization.

Free Float Market Capitalization is a measure of the market value of an asset's supply that is issued and available to market participants. This excludes supply that is held by company insiders, controlling investors, and long term strategic holders. Free Float Supply also excludes large token burn wallets and funds that have been provably lost.

REALIZED CAP

Realized cap is calculated by valuing each unit of supply at the price it last moved on-chain (i.e. the last time it was transacted). For example if a coin was last transacted three years ago when the price was \$2,500, that particular coin would be priced at \$2,500 instead of the current market price. The realized cap is the total sum of all coins priced this way.

Realized cap provides a more realistic representation of market cap and discounts coins that are lost or out of circulation.

MARKET TO REALIZED VALUE (MVRV)

MVRV is the ratio of a cryptoasset's market cap (aka market value) to realized cap (aka realized value).

It can be used to help gauge cryptoasset market tops and bottoms. Historically, periods where Bitcoin's MVRV has dropped below 1.0 have coincided with market bottoms and in hindsight have been the best times to buy.

TOTAL STABLECOIN SUPPLY

Total Stablecoin Supply based on Coin Metrics' Current Supply, which reflects all native units ever created and visible on the ledger (i.e., issued). Tether supply includes Tether Omni, Tether ETH, and Tether Tron. Other Stablecoins include PAX, DAI, USDC, BUSD, GUSD, HUSD, TUSD, and SAI.

TETHER PREMIUM/DISCOUNT TO USD

30-day moving average of Tether's price YTD premium or discount to USD. Price represents Coin Metrics' Reference Rate, which is calculated using an independent methodology robust to manipulation. [More information](#) on Coin Metrics' Reference Rates.

MARKET CAPITALIZATION

See prior explanation.

TRANSFER VALUE, ADJUSTED

Transfer value is the total amount of a cryptoasset transferred over the course of a day, denominated in USD. We adjust raw transfer value to remove noisy "non-economic" behavior such as self-sends and spam.

TRANSACTION COUNT

Transaction count is the measure of the number of transactions either sent or received on a daily basis. Similar to active addresses it is a measure of network activity but it is susceptible to some spam and other types of manipulation.

MEDIAN TRANSFER VALUE

The median USD value transferred per transfer (i.e., the median "size" in USD of a transfer) between distinct addresses.

VELOCITY

The ratio of the value transferred (i.e., the aggregate "size" of all transfers) in the trailing 1 year divided by active supply in the trailing 1 year.

Velocity can be thought of as the rate of turnover— the number of times that an average native unit among the active supply has been transferred in the past 1 year.

DATA EXPLAINER (P.5)

MEMPOOL SIZE VS. FEE RATES

Coin Metrics' Mempool Monitor provides a full breakdown of what other network participants are willing to pay to have their transactions settled, thereby enabling precise fee estimation and settlement prediction. The chart showcases all feerate levels that have corresponding transactions in the mempool. For each feerate level, the total number of mempool transactions, as well as their size (in virtual bytes), are monitored.

BTC RECOMMENDED FEE RATE

The recommended minimum feerate required for a transaction to be included in the upcoming blockchain block. This metric accounts for situations where there are many transactions paying the minimum feerate by adding an additional cushion to the minimum estimate, providing better settlement guarantees.

BTC FEE TRENDS

The USD value of the mean and median fee per transaction that interval. Average fees per unit of blockspace (bytes and virtual bytes) are also calculated.

TRANSACTION COUNT PER BLOCK

The count of all transactions within the most recent block processed.

ETH GAS PRICES

The most recent block we processed within a 1-minute window is evaluated and its Base Fee and Priority Fees are captured. The concept of a Base Fee was introduced as part of EIP-1559 and it represents the portion of the total transaction fees that is destroyed and taken out of circulation (i.e. burnt). Ethereum post-1559 requires users to pay for a Base Fee as a prerequisite to include transactions in a block. The Base Fee can go up or down on the basis of the size (in gas units) of the previous block. The concept of a Priority Fee was introduced as part of EIP-1559 and it represents the portion of the total transaction fees that rewards validators. This serves as an added incentive so that validators prioritize transactions that have opted-in and paid a tip.

ETH FEE TRENDS

The USD value of the mean and median fee per transaction that interval. The sum gas used (i.e. paid) across all transactions and mean gas used (i.e. paid) per transaction that day are also captured.

NVT RATIO

The ratio of the network value (or market capitalization) to the 90-day moving average of the adjusted transfer value.

NVT uses native units network value and adjusted transaction volume. It is therefore available at the asset's genesis, unlike if it was using USD values. It can be thought of as a rough P/E (price to earnings) ratio proxy for crypto assets.

ACTIVE ADDRESSES

Active addresses is the unique number of addresses that either send or receive a transaction, calculated daily.

This metric can serve as a rough proxy for daily active users. However, it's not exact— a single user can have many addresses, and a single address can be owned by many users.

FREE FLOAT SUPPLY

Coin Metrics' free float supply takes many of the best practices from traditional capital markets and applies them to cryptoassets to identify supply that is highly unlikely to be available to the market in the short to mid-term. In doing so, free float supply provides a better approximation of a cryptoasset's liquidity and market capitalization compared to standard supply measurements. [More information](#) on Coin Metrics Free Float Supply.

TRANSACTION COUNT

See prior explanation.

TRANSFER VALUE, ADJUSTED

See prior explanation.

ADDRESSES WITH \geq \$1

The count of addresses that hold at least \$1 worth of a cryptoasset. This gives a rough estimation of the amount of users that hold an asset, with the same caveats that apply for active addresses.

ADDRESSES WITH \geq \$1M

The count of addresses that hold at least \$1M worth of a cryptoasset. This gives a rough estimation of the amount of institutional investors that hold an asset, with the same caveats that apply for active addresses.