# STATE OF THE MARKET

OCT. 12 - 18, 2023

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

COINMETRICS

MARKET SUMMARY

The ETF emotional rollercoaster has been fraught with unforeseen jolts, with false reports of BlackRock's approval briefly sending BTC to heights above $30K. On Monday, crypto news outlet Cointelegraph ignited a social media frenzy, circulating the headline 'BREAKING: SEC APPROVES ISHARES BITCOIN SPOT ETF - BBG' on X. In short order, the word 'REPORTEDLY' was appended to the post, with Cointelegraph acknowledging the claim was based on an unverified rumor on Telegram. BlackRock later confirmed their ETF application was still under review by the SEC, though during a CNBC interview, BlackRock CEO Larry Fink extolled that "this rally is way beyond the rumor," representing a broader "flight to quality" as investors seek hedges against Israeli war uncertainty. To Fink's point, Bitcoin has held strong above $28,000, maintaining a steady uptrend despite Cointelegraph's editorial misfire. Though the BlackRock ETF is still pending approval, analysts note the dialogue between applicants and the SEC should be more constructive going forward. A recent update to the Ark and 21shares prospectus is a hopeful sign, given these adjustments are "a step that typically only occurs when a fund is on its way to being approved," according to Bloomberg's ETF experts James Seyffart & Eric Balchunas. There's also been a notable tone shift on the Grayscale GBTC conversion— following the SEC's decision to not appeal August's pro-Grayscale court ruling, the "GBTC discount" has narrowed to just 13%, the closest the fund has traded to Net Asset Value in nearly 2 years. The trial of Sam Bankman-Fried has entered its next chapter, with FTX's former chief engineer Nishad Singh taking the stand as part of a plea deal. Singh provided a scathing retrospective of Sam's spending habits, telling the jury he would regularly tell Bankman-Fried his investments "reeked of excessiveness" and "flashiness." Prosecutors also provided a spreadsheet of FTX's celebrity endorsements, with payments to figures like Tom Brady & Larry David totaling north of $1.13 billion. In an effort to generate more sustainable income, Uniswap Labs is adding a 0.15% swap fee to certain tokens traded in their web app and wallet. The fee won't be natively integrated into the underlying DEX protocol, affecting only users that utilize Uniswap's user-friendly front ends, and co-founder Hayden Adams emphasized the interface fee is "one of the lowest in the industry." Meanwhile, centralized exchange rival Coinbase is kicking off their derivatives offering, rolling out perpetual futures trading for customers outside of the U.S. Having received approval from the Bermuda Monetary Authority, Coinbase Advance users can now use USDC to trade 3-5x leveraged perp positions on BTC, ETH, LTC, and XRP. On Tuesday, Reddit reported they would sunset their "Community Points" initiative, winding down the ERC-20 token-powered rewards program by early November. After 3 years of struggling to scale the system— deploying at first on Etheruem mainnet and later Aribitrum Nova— Reddit concluded the required resources were "too high to justify," with a nod to various technical & regulatory challenges. Though 2021's bull market brought many enterprise adopters into the blockchain space, the wear and tear of an unwavering bear market is testing corporate commitments, favoring business models over buzzwords.

CRYPTO MARKET CAPITALIZATION (USD)
1Y (2023-10-18)

COIN METRICS

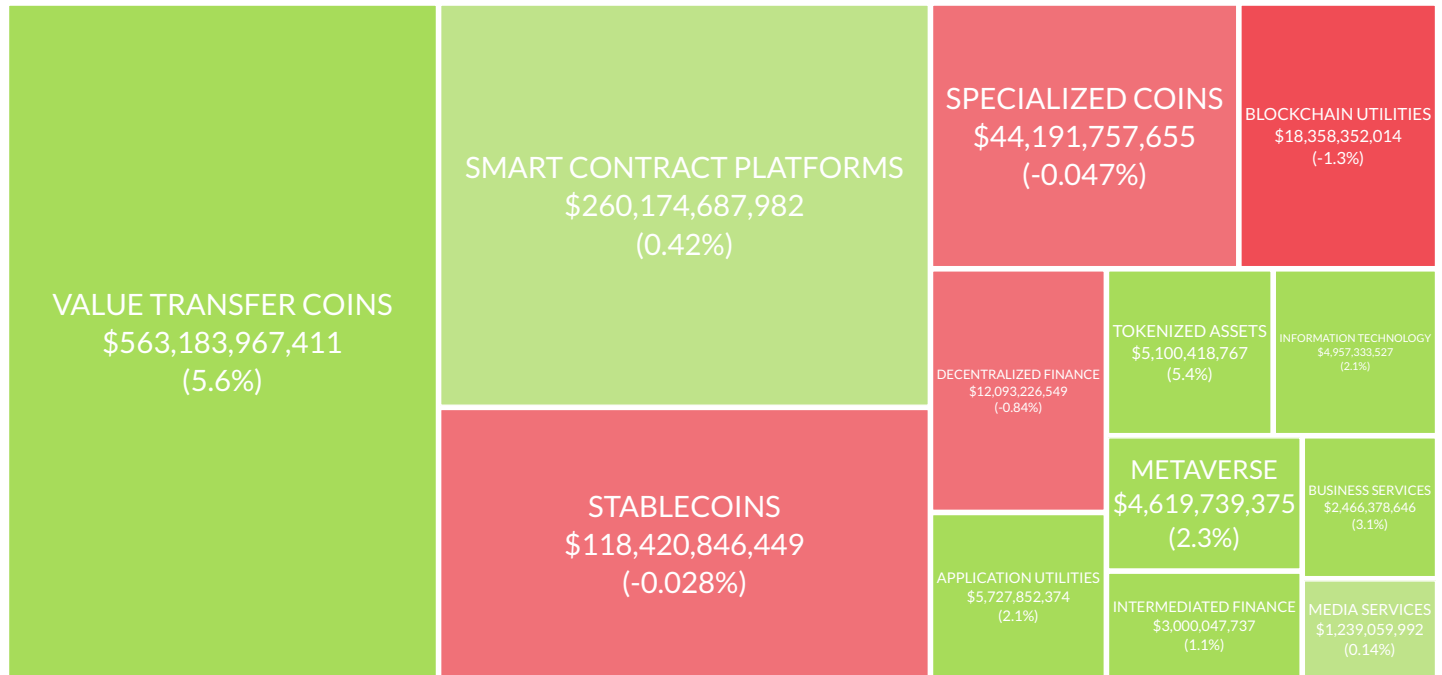Legend: Bitcoin | Ethereum | Other
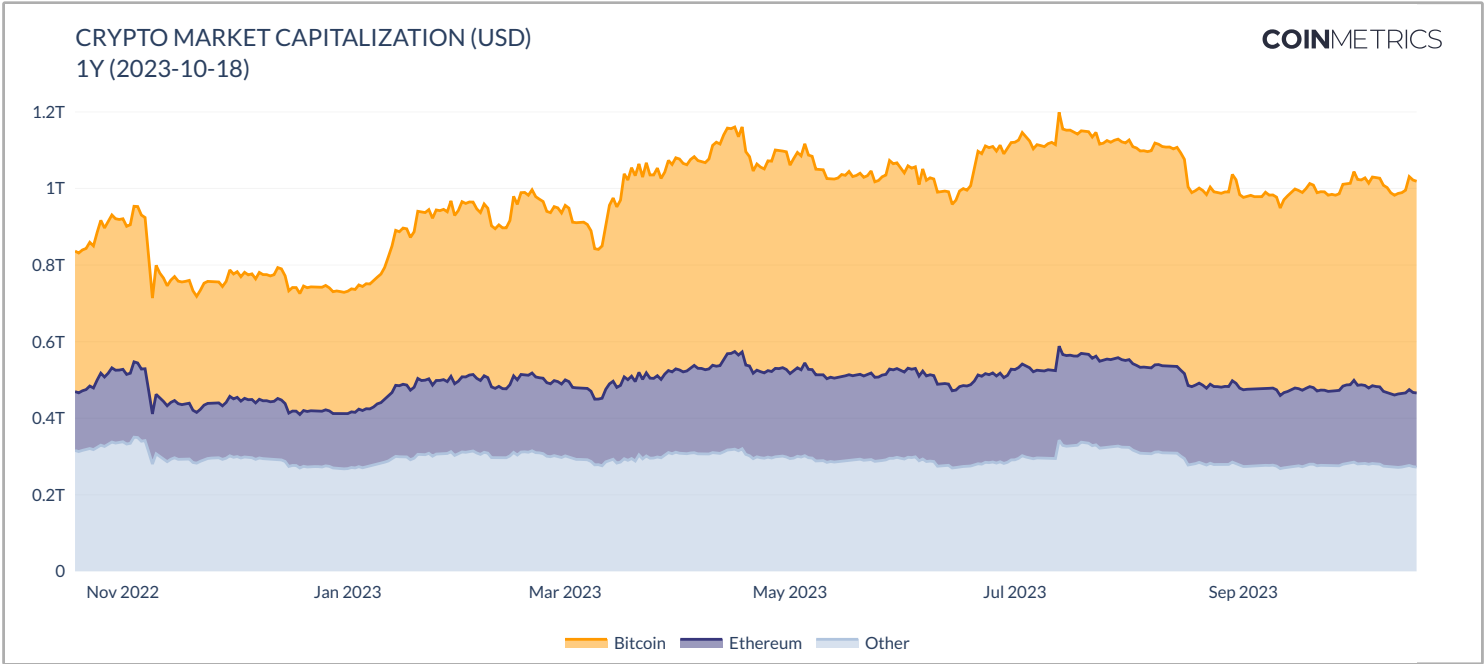
PRICE (CMBI CONSTITUENTS)

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	$28,291.17	+5.97%	$28,520.40	$26,696.26	+48.45%	$31,644.02	$15,799.60
ETH	$1,565.52	+2.21%	$1,592.07	$1,531.62	+21.82%	$2,129.88	$1,103.83
SOL	$23.74	+11.59%	$24.10	$21.27	-16.38%	$36.57	$8.35
ADA	$0.24	+0.31%	$0.25	$0.24	-28.52%	$0.45	$0.24
DOGE	$0.06	+1.23%	$0.06	$0.06	-2.35%	$0.14	$0.06
TRX	$0.09	+4.90%	$0.09	$0.09	+43.17%	$0.09	$0.05
BNB	$210.60	+2.56%	$214.64	$205.34	-21.69%	$353.50	$204.88
AVAX	$8.94	-1.34%	$9.41	$8.94	-41.76%	$22.04	$8.82
LINK	$7.36	+2.33%	$7.53	$7.17	+10.06%	$9.12	$5.09
XLM	$0.10	+1.73%	$0.11	$0.10	-6.24%	$0.17	$0.07
CMBI10	$2,817.20	+4.63%	$2,850.42	$2,692.58	+28.82%	$3,398.54	$1,838.40

ASSET CLASSES

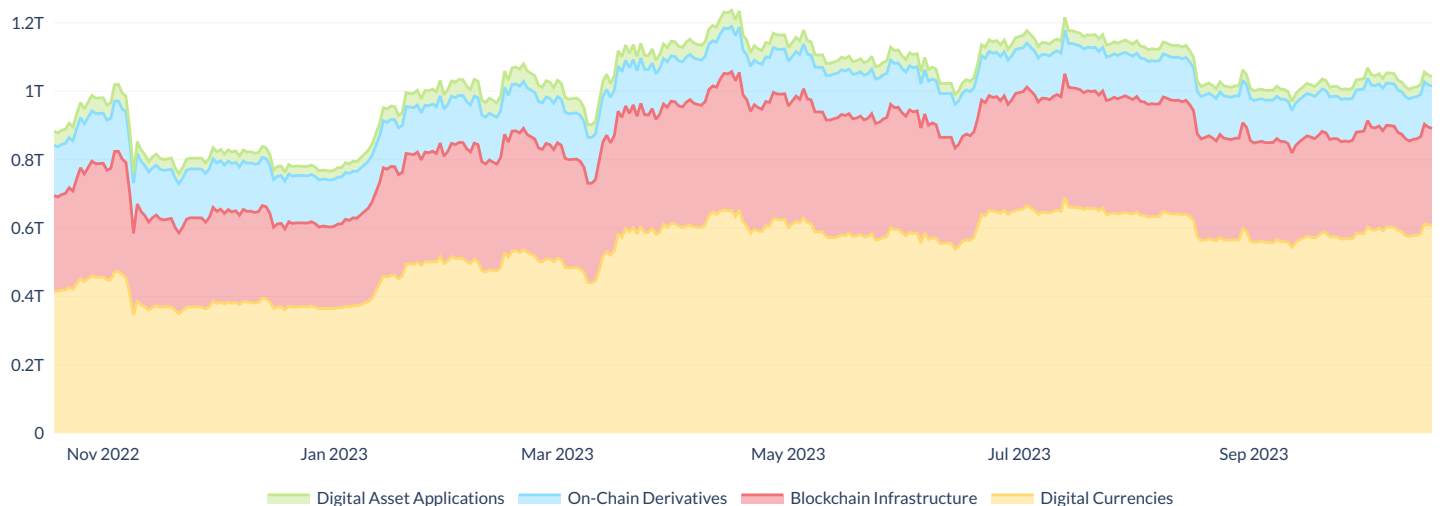## DIGITAL ASSET SECTOR 7D MARKETCAP (2023-10-18)

VALUE TRANSFER COINS
$563,183,967,411
(5.6%)

SMART CONTRACT PLATFORMS
$260,174,687,982
(0.42%)

STABLECOINS
$118,420,846,449
(-0.028%)

SPECIALIZED COINS
$44,191,757,655
(-0.047%)

BLOCKCHAIN UTILITIES
$18,358,352,014
(-1.3%)

DECENTRALIZED FINANCE
$12,093,226,549
(-0.84%)

TOKENIZED ASSETS
$5,100,418,767
(5.4%)

INFORMATION TECHNOLOGY
$4,957,333,527
(2.1%)

METAVERSE
$4,619,739,375
(2.3%)

BUSINESS SERVICES
$2,466,378,646
(3.1%)

APPLICATION UTILITIES
$5,727,852,374
(2.1%)

INTERMEDIATED FINANCE
$3,000,047,737
(1.1%)

MEDIA SERVICES
$1,239,059,992
(0.14%)

TRENDING SECTOR INDEXES, 7 DAY TREND

CMBIAUE CMBIBUE CMBIBSE CMBIDFIE CMBIIFE CMBIITE CMBIMSE

CMBIMTAE CMBISCPE CMBISCE CMBIVTCE CMBIDEXE CMBINSE CMBINFTE

CRYPTO MARKET CAPITALIZATION (USD) BY DATONOMY CLASS

1.2T						
1T						
0.8T						
0.6T						
0.4T						
0.2T						
0						
Nov 2022	Jan 2023	Mar 2023	May 2023	Jul 2023	Sep 2023	

■ Digital Asset Applications ■ On-Chain Derivatives ■ Blockchain Infrastructure ■ Digital Currencies

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	$28,291.17	+5.97%	$28,520.40	$26,696.26	+48.45%	$31,644.02	$15,799.60
CMBIBTCT	$30,395.70	+5.97%	$30,641.99	$28,682.15	+48.45%	$33,997.97	$16,974.91
CMBIETH	$1,565.52	+2.21%	$1,592.07	$1,531.62	+21.82%	$2,129.88	$1,103.83
CMBIETHT	$1,699.51	+2.21%	$1,728.34	$1,662.71	+21.82%	$2,312.19	$1,198.31

CMBI BITCOIN
1Y (2023-10-18)

COINMETRICS

CMBI ETHEREUM
1Y (2023-10-18)

COINMETRICS

TRENDING INDEXES, 7 DAY TREND

COINMETRICS

CMBISAND	CMBISOL	CMBIMANA	CMBIADA	CMBILTC	CMBILINK	CMBIEOS	CMBIXTZ

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	$2,817.20	+4.63%	$2,850.42	$2,692.58	+28.82%	$3,398.54	$1,838.40
CMBI10E	$3,922.75	+3.12%	$4,006.67	$3,804.00	-16.56%	$6,420.90	$3,409.70
CMBI10EX	$5,621.12	+2.51%	$5,721.11	$5,483.46	+5.36%	$7,991.44	$4,562.49
CMBI10M	$9,970.67	+2.28%	$9,970.67	$9,748.02	-19.87%	$13,044.36	$9,310.27
CMBIBE	$13,852.32	+4.70%	$14,005.10	$13,230.27	+38.56%	$16,210.93	$8,387.96

CMBI 10
1Y (2023-10-18)

COINMETRICS

CMBI 10 MOMENTUM
1Y (2023-10-18)

COINMETRICS

MARKET MOVEMENT

TRADING DIARY, 7 DAY

ADVANCING VOLUME	$73,025,516,262
DECLINING VOLUME	$28,368,487,742
ADVANCES	351
DECLINES	371

EXCHANGE SPOT SHARE, 7 DAY MEAN

100%
50%
0%

BINANCE UPBIT BYBIT HUOBI COINBASE OKEX BULLISH GATE.IO KRAKEN BIBOX CRYPTO.COM KUCOIN BITSTAMP POLONIEX LMAX BITFINEX BITFLYER GEMINI BITBANK ITBIT BINANCE.US BITTREX
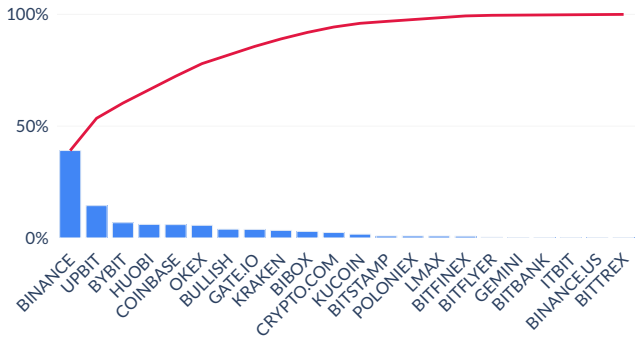
BASE ASSET SPOT SHARE, 7 DAY MEAN

80%
60%
40%
20%
0%

BTC ETH USDT LOOM USDC XRP ORBS SOL STRAX FDUSD BNB META WAXP STPT BOND BCH LINK BSV DOGE BUSD T TUSD MATIC ZRX LTC
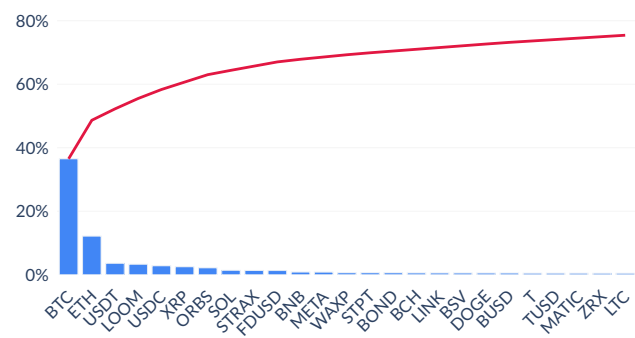
BTC PERPETUALS, TOTAL LIQUIDATIONS

4M
3M
2M
1M
0
−1M

Sep 24 2023   Oct 1   Oct 8   Oct 15

■ Shorts Liquidated   ■ Longs Liquidated

PRICE CHANGE, 7 DAY

AIDOGE	136.82%
ORBS	123.66%
STARL	105.03%
BOND	100.52%
VIB	75.33%
STRAX	68.78%
TURBO	62.38%
REVV	40.90%
HOT_HOLO	37.46%
WAXP	36.91%
SSX	36.63%
SAITAMA	34.89%
OAX	32.14%
PRIME	31.34%
NII	30.74%
ZRX	30.15%
RDD	28.49%
NXT	28.12%
BAND	27.95%
T	26.87%
XEN	26.68%
EZ	26.19%
KEEP	25.11%
ARV	23.68%
OOKI	22.41%
MOVEZ	22.27%
MED	20.87%
MX	19.27%
MC	19.10%
PERL	19.06%
STPT	18.02%
LOOM	17.50%
CVC	17.42%
BSV	16.94%
TRB	16.52%
LSK	15.58%
MBL	15.53%
WRX	14.68%
KISHU	14.53%
UMA	14.32%
ARKM	-11.93%
MBS	-12.04%
PAY	-12.11%
XPR	-12.26%
LBC	-12.31%
REP	-12.31%
DX	-12.38%
GLMR	-12.64%
PSTAKE	-13.02%
QASH	-13.17%
MAGIC	-13.19%
ICE	-13.76%
MNT	-13.87%
SSV	-13.89%
FORT	-14.26%
BIT	-14.44%
NEON	-14.69%
BLD	-14.98%
SRM	-15.45%
SOLVE	-15.47%
STRM	-15.66%
SWRV	-15.88%
SHPING	-16.74%
VELA	-17.81%
HFT	-18.49%
GFT	-18.94%
MULTI	-19.62%
TAPT	-20.53%
QRDO	-22.40%
GARI	-22.85%
EVER	-22.88%
SUKU	-25.18%
STORJ	-25.21%
SOS	-27.98%
UMEE	-28.86%
ASTRA	-32.08%
TENET	-34.16%
MPLX	-36.42%
MITH	-40.40%
GM	-58.70%

−50%   0%   50%   100%   150%

AGGREGATE VOLUME

REPORTED SPOT VOLUME (USD) BY EXCHANGE 3M (2023-10-18)

COINMETRICS

Legend: binance, coinbase, 15 others, upbit, huobi, bybit, okex, kraken, gate.io, bullish, mexc

BTC SPOT VOLUME, % BY EXCHANGE 3M (2023-10-18)

COINMETRICS

Legend: binance, coinbase, 15 others, bybit, bullish, okex, mexc, gate.io, upbit, huobi, kraken
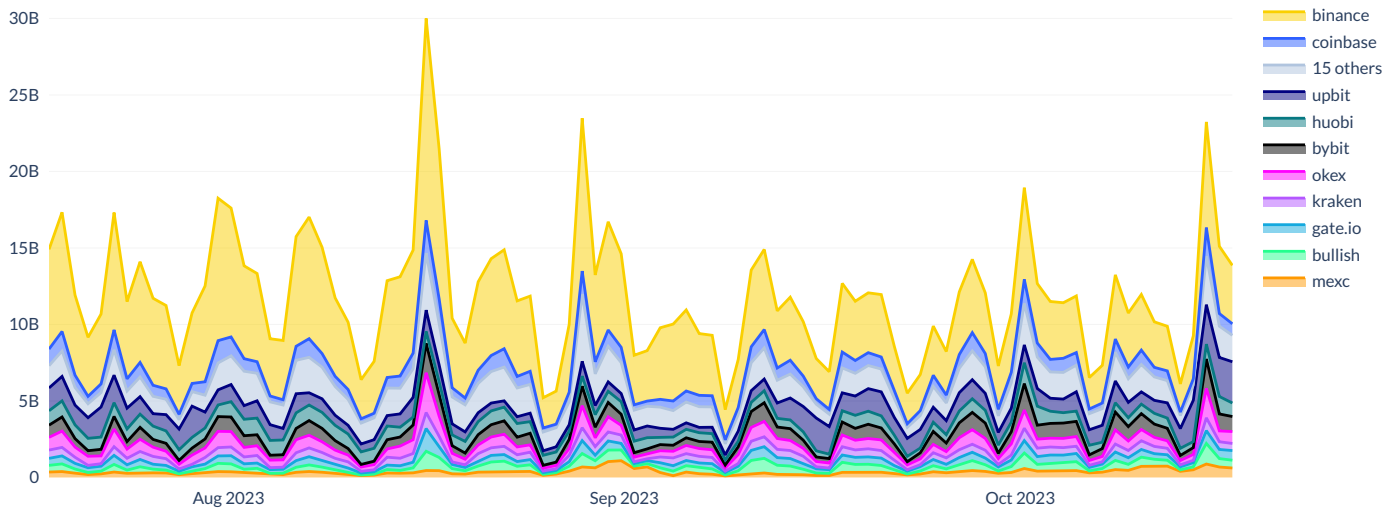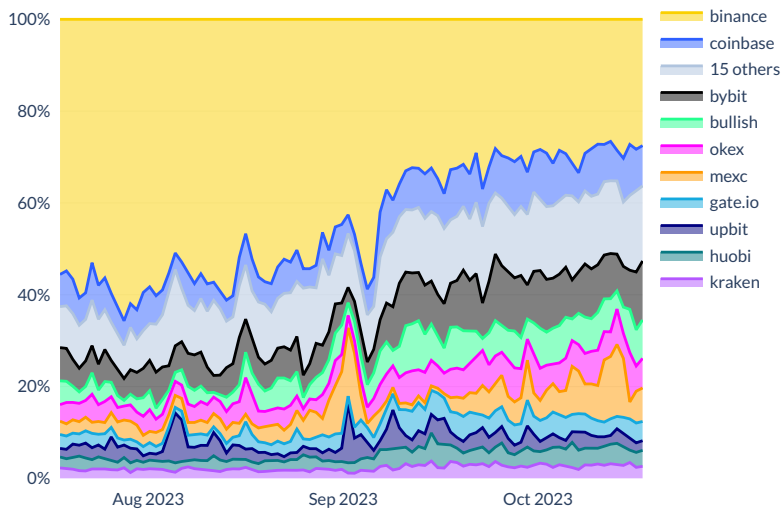
BTC SPOT VOLUME LEADERS

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

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BINANCE	+44.27%	1,137,270,071	2,797,408,671	368,302,992
COINBASE	+54.89%	391,254,262	1,140,091,143	86,329,162
BYBIT	+92.25%	415,361,999	874,398,876	103,571,218
BULLISH	+68.05%	329,827,380	964,947,626	50,887,961
OKEX	+49.40%	315,306,194	1,106,642,250	99,646,083
MEXC	-22.99%	330,077,835	423,894,367	202,409,099
GATE.IO	+87.04%	160,957,564	424,177,486	34,817,795
UPBIT	+45.18%	97,828,526	273,618,278	40,964,087
HUOBI	+20.29%	139,982,245	277,382,036	59,686,311
KRAKEN	+31.62%	122,840,818	353,384,578	38,720,222

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	-21.86%	417,262,382	836,682,023	184,763,402
COINBASE	-16.55%	117,751,949	259,450,080	38,701,779
BYBIT	-36.65%	299,617,842	437,623,229	131,100,298
BULLISH	-27.97%	175,855,360	415,679,251	49,115,551
OKEX	-37.60%	137,086,485	358,542,574	40,857,637
GATE.IO	+13.23%	106,188,790	187,770,082	41,311,639
MEXC	-14.89%	104,964,681	156,593,895	68,009,976
CRYPTO.COM	+3.24%	136,685,882	228,019,215	47,836,148
HITBTC	-33.84%	33,831,302	65,102,180	13,841,107
KRAKEN	+0.04%	33,560,301	80,485,140	9,629,503

ETH SPOT VOLUME, % BY EXCHANGE 3M (2023-10-18)

COINMETRICS

Legend: binance, coinbase, 15 others, bybit, bullish, okex, gate.io, mexc, crypto.com, hitbtc, kraken
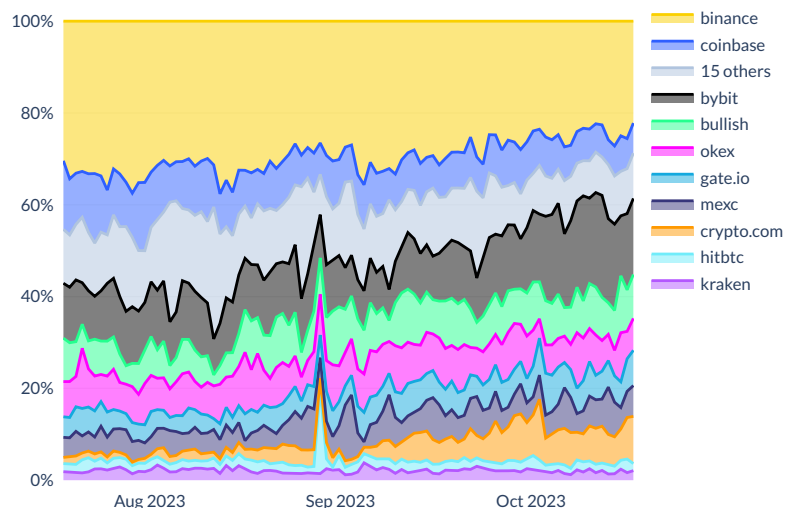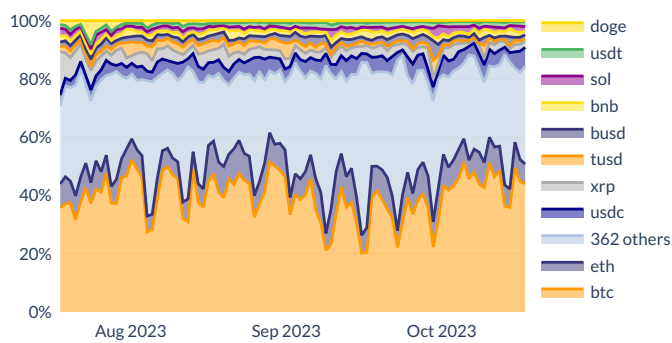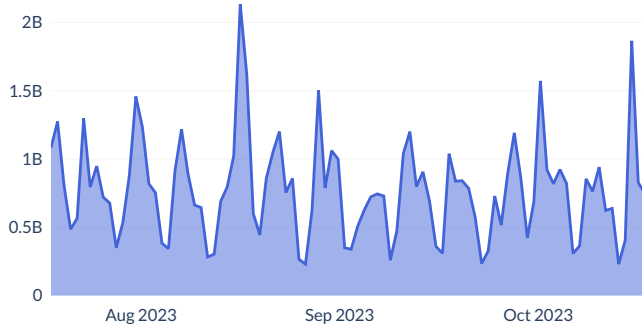
EXCHANGE SPOT VOLUME

BINANCE DAILY USD SPOT VOLUME
3M (2023-10-18)
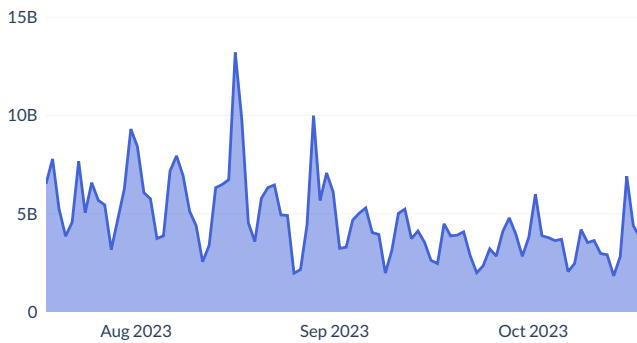
COINMETRICS

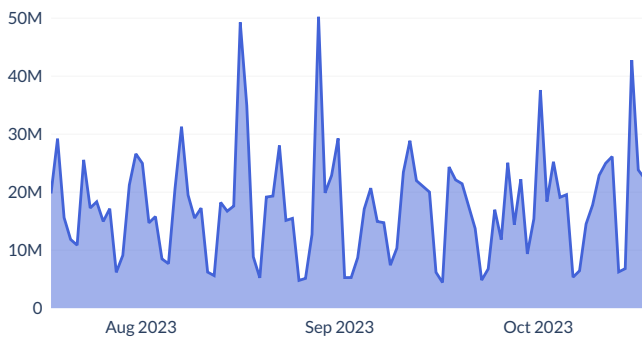## BINANCE SPOT VOLUME, % BY ASSET
3M (2023-10-18)

COINMETRICS

Legend:
- doge
- usdt
- sol
- bnb
- busd
- tusd
- xrp
- usdc
- 362 others
- eth
- btc

COINBASE DAILY USD SPOT VOLUME
3M (2023-10-18)

COINMETRICS

COINBASE SPOT VOLUME, % BY ASSET
3M (2023-10-18)

COINMETRICS

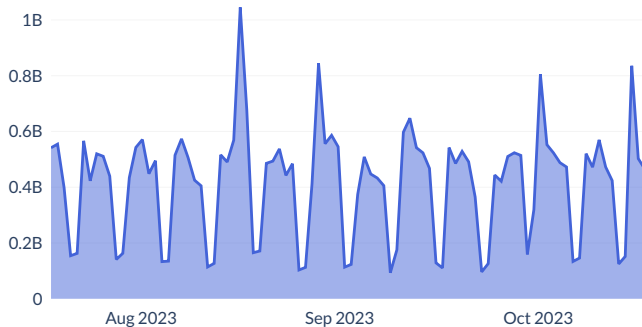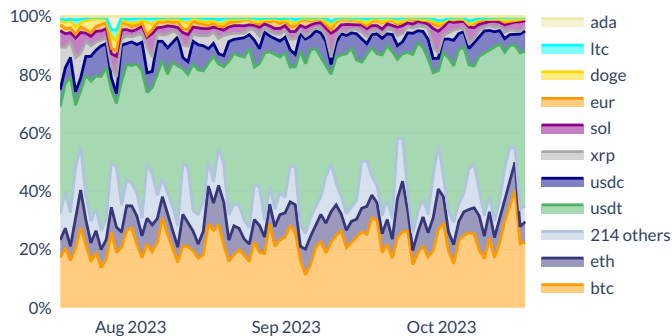Legend:
- xlm
- shib
- link
- ltc
- doge
- sol
- xrp
- usdt
- 235 others
- eth
- btc
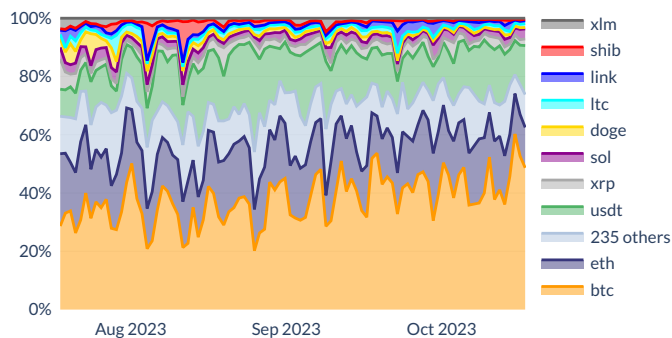
GEMINI DAILY USD SPOT VOLUME
3M (2023-10-18)

COINMETRICS

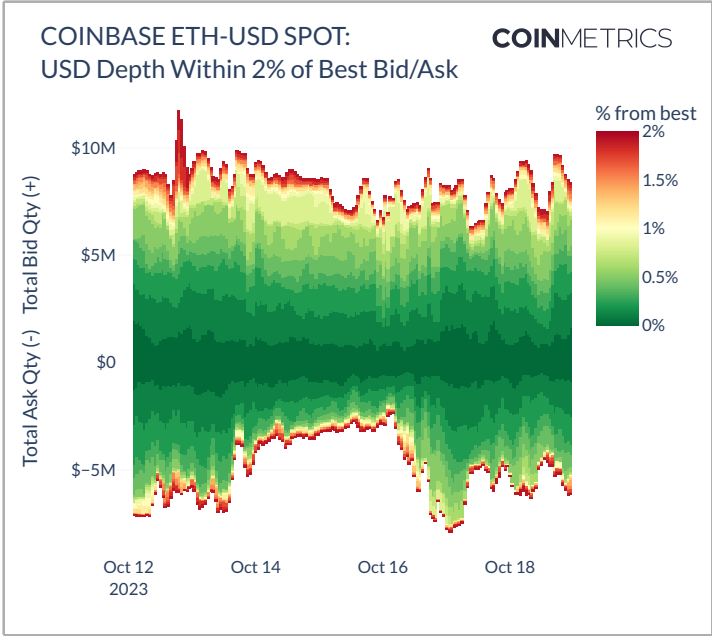## GEMINI SPOT VOLUME, % BY ASSET
3M (2023-10-18)

COINMETRICS

Legend:
- gusd
- doge
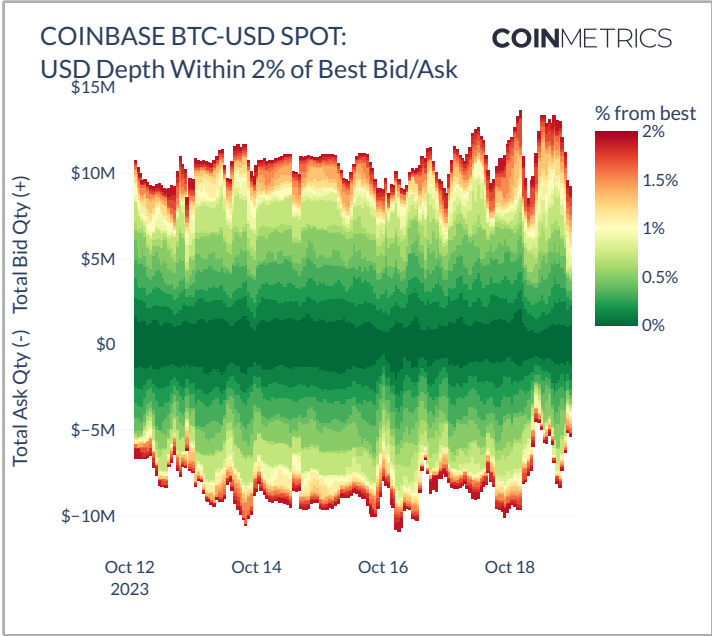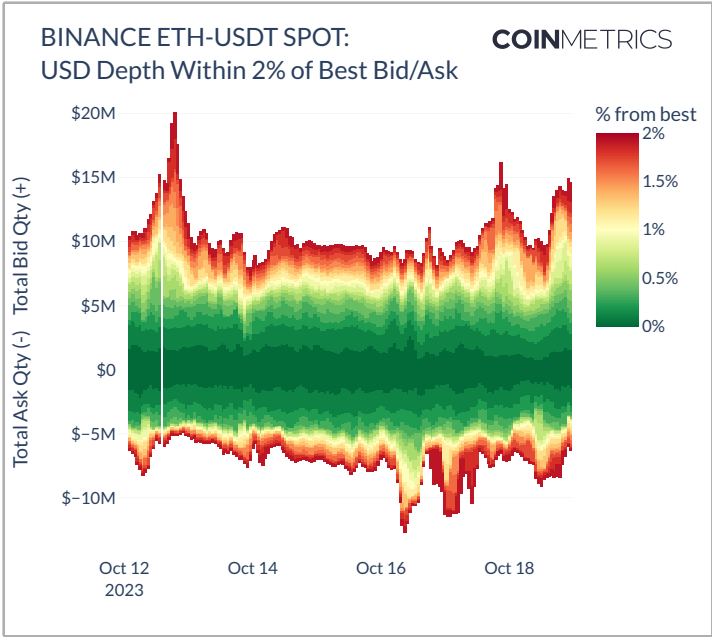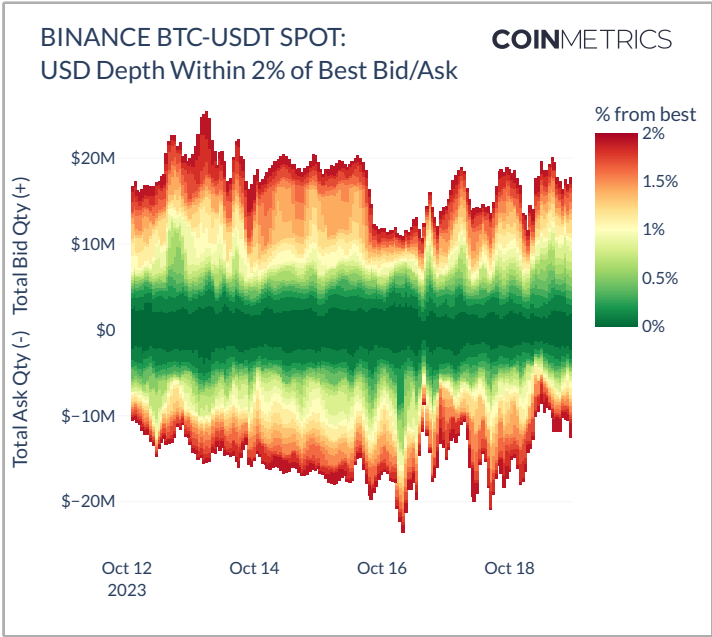- link
- xrp
- ltc
- sol
- usdc
- usdt
- 73 others
- eth
- btc
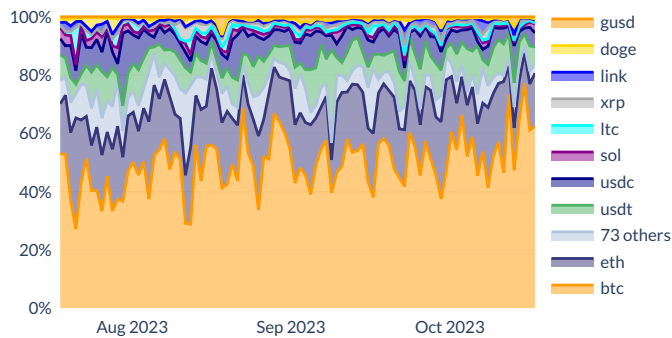
KRAKEN DAILY USD SPOT VOLUME
3M (2023-10-18)

COINMETRICS

KRAKEN SPOT VOLUME, % BY ASSET
3M (2023-10-18)

COINMETRICS

Legend:
- ada
- ltc
- doge
- eur
- sol
- xrp
- usdc
- usdt
- 214 others
- eth
- btc

ORDER BOOK DEPTH

BINANCE BTC-USDT SPOT:
USD Depth Within 2% of Best Bid/Ask
COINMETRICS

BINANCE ETH-USDT SPOT:
USD Depth Within 2% of Best Bid/Ask
COINMETRICS

COINBASE BTC-USD SPOT:
USD Depth Within 2% of Best Bid/Ask
COINMETRICS

COINBASE ETH-USD SPOT:
USD Depth Within 2% of Best Bid/Ask
COINMETRICS

KRAKEN BTC-USD SPOT:
USD Depth Within 2% of Best Bid/Ask
COINMETRICS

KRAKEN ETH-USD SPOT:
USD Depth Within 2% of Best Bid/Ask
COINMETRICS

DEX DIGEST

RISING VOLUME

LOOM

BAND_ETH

FEI_ETH

UNISWAP DAILY TRADING VOLUME
(2023-10-18)

Volume (USD)

1.2B
1B
0.8B
0.6B
0.4B
0.2B
0

Jul 30 — Aug 13 — Aug 27 — Sep 10 — Sep 24 — Oct 08

■ Uniswap v3 ■ Uniswap v2

FALLING VOLUME

BAL

USDD_ETH

GBPT
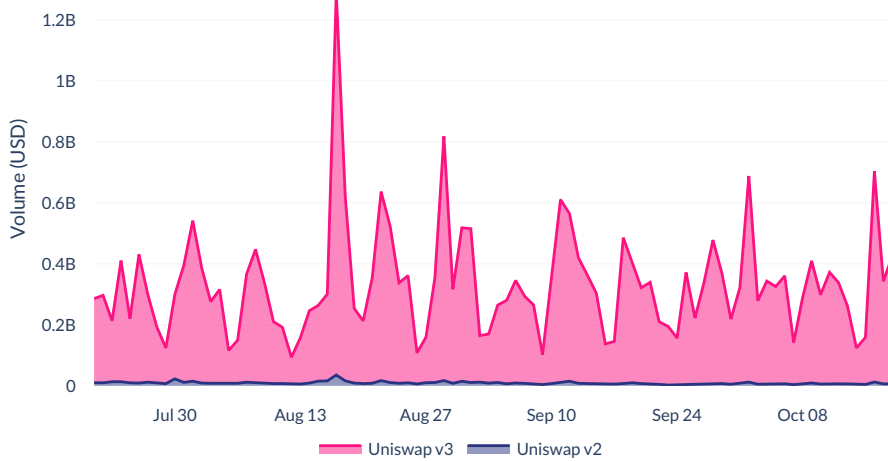
UNISWAP V3 VOLUME BY FEE TIER
(2023-10-18)

80%
60%
40%
20%
0%

Jul 30 — Aug 13 — Aug 27 — Sep 10 — Sep 24 — Oct 08

— 100 BPS — 30 BPS — 5 BPS — 1 BPS
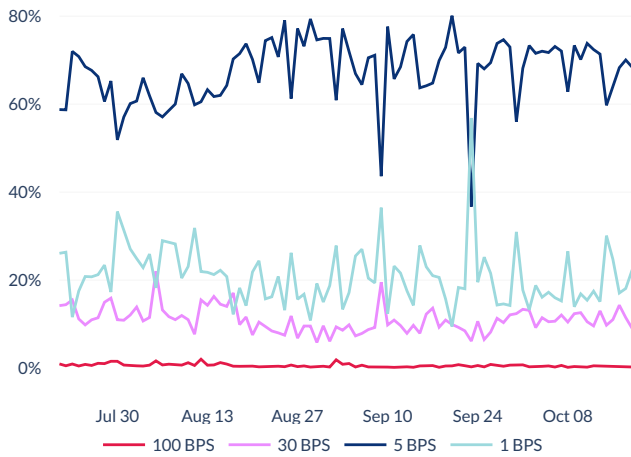
UNISWAP V3 REVENUE BY FEE TIER
(2023-10-18)

100%
80%
60%
40%
20%
0%

Jul 30 — Aug 13 — Aug 27 — Sep 10 — Sep 24 — Oct 08

■ 100 BPS ■ 30 BPS ■ 5 BPS ■ 1 BPS
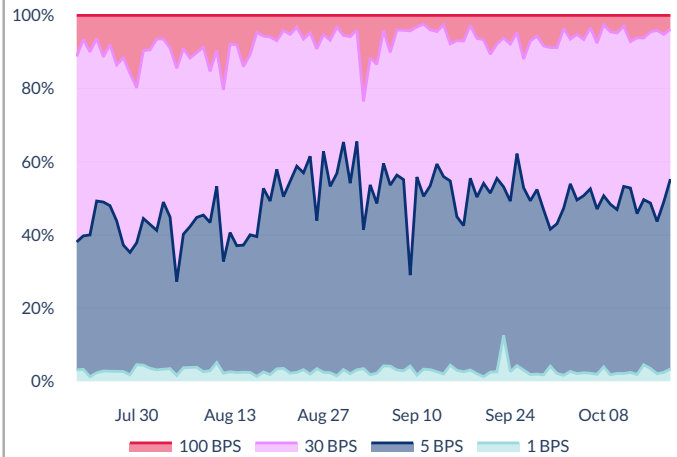
UNISWAP V3 STABLECOIN TVL
(2023-10-18)

Total Value Locked

600M
500M
400M
300M
200M
100M
0

Jul 30 — Aug 13 — Aug 27 — Sep 10 — Sep 24 — Oct 08

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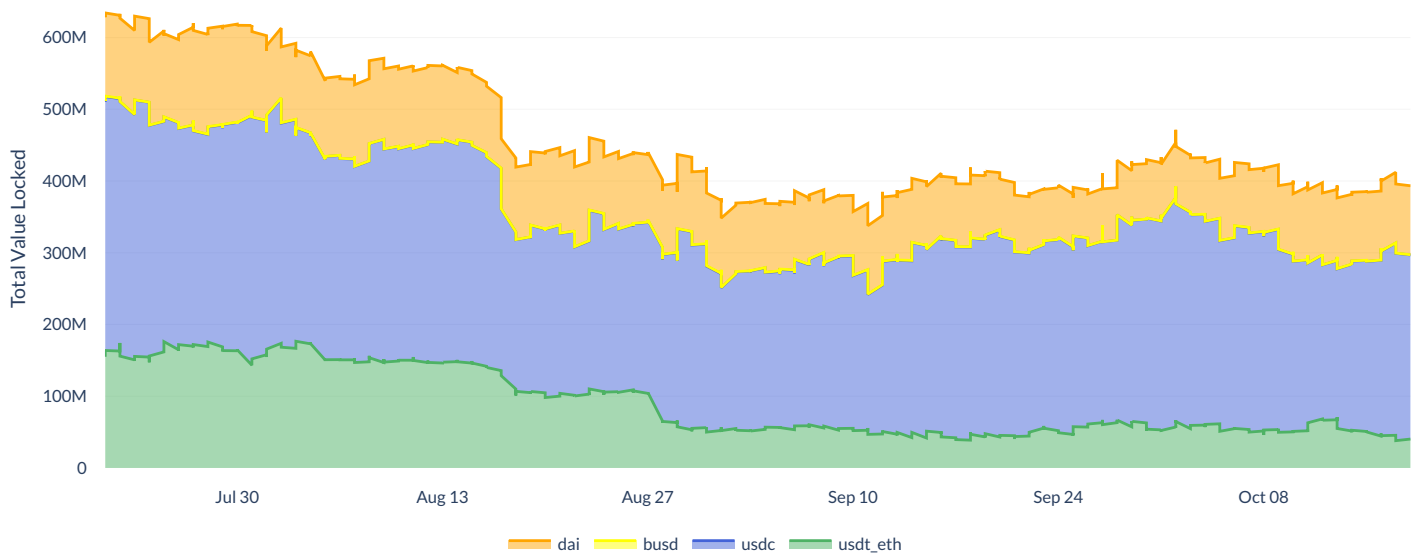
Note: DEX metrics currently capture a subset of the top liquidity pools on the Ethereum-based instantiation of each protocol.

DEFI BALANCE SHEETS
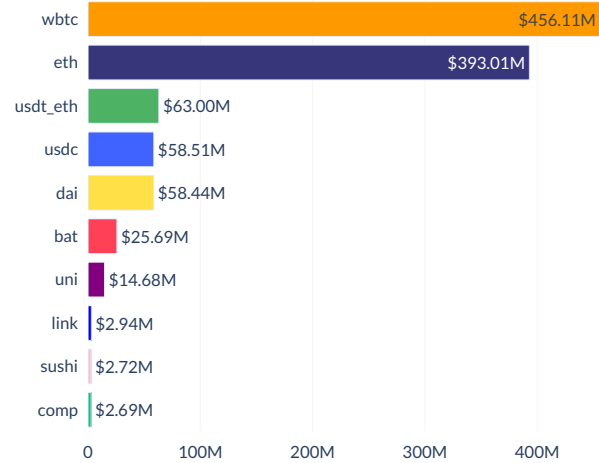
LENDING PROTOCOL TVL (USD)
1Y (2023-10-18)

Legend: AAVE_V2_ETH — COMPOUND_V2_ETH

COMPOUND V2 BALANCE SHEET

PROTOCOL HEALTH RATIOS	VALUE	7D CHANGE
CURRENT RATIO	0.710626	0.56%
DEBT TO ASSETS RATIO	0.969964	0.01%
PROTOCOL UTILIZATION RATIO	0.320341	-1.25%
LIQUID SUPPLY RATIO	0.710626	0.56%

ASSETS AND LIABILITIES	VALUE	7D CHANGE
ASSETS TOTAL USD	$1,565M	1.28%
ASSETS TOTAL COUNT	19	0.0%
LIABILITIES TOTAL USD	$1,518M	1.29%
LIABILITIES TOTAL COUNT	19	0.0%
LOANS LENT TOTAL USD	$486M	0.02%
TVL TOTAL USD	$1,078M	1.85%
NET WORKING CAPITAL USD	-$439M	-0.07%

TOP 10 ASSETS
BY TOTAL VALUE LOCKED (USD)

Asset	Value
wbtc	$456.11M
eth	$393.01M
usdt_eth	$63.00M
usdc	$58.51M
dai	$58.44M
bat	$25.69M
uni	$14.68M
link	$2.94M
sushi	$2.72M
comp	$2.69M

AAVE V2 BALANCE SHEET

PROTOCOL HEALTH RATIOS	VALUE	7D CHANGE
CURRENT RATIO	0.658362	-0.32%
DEBT TO ASSETS RATIO	1.000151	0.0%
PROTOCOL UTILIZATION RATIO	0.341489	0.63%
LIQUID SUPPLY RATIO	0.658362	-0.32%

ASSETS AND LIABILITIES	VALUE	7D CHANGE
ASSETS TOTAL USD	$3,018M	-2.86%
ASSETS TOTAL COUNT	52	0.0%
LIABILITIES TOTAL USD	$3,019M	-2.86%
LIABILITIES TOTAL COUNT	52	0.0%
LOANS LENT TOTAL USD	$1,031M	-2.26%
TVL TOTAL USD	$1,987M	-3.18%
NET WORKING CAPITAL USD	-$1,031M	-2.25%

TOP 10 ASSETS
BY TOTAL VALUE LOCKED (USD)

Asset	Value
steth_lido	$971.77M
wbtc	$487.68M
weth	$313.76M
link	$48.32M
usdt_eth	$47.67M
usdc	$36.98M
dai	$15.64M
zrx	$10.18M
aave	$8.00M
ens	$7.50M
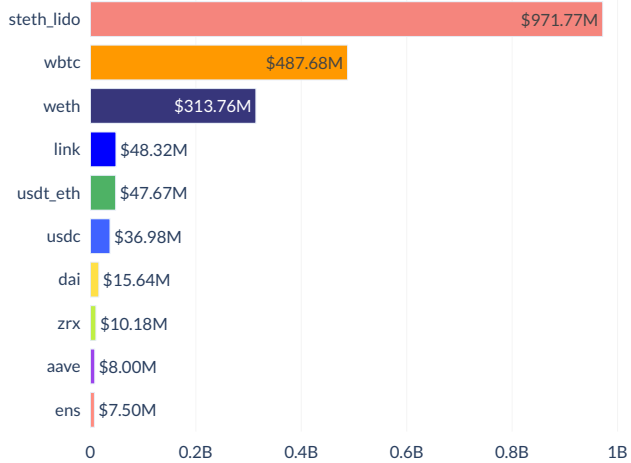
FUTURES FEED

OPEN INTEREST
1Y (2023-10-18)

COINMETRICS
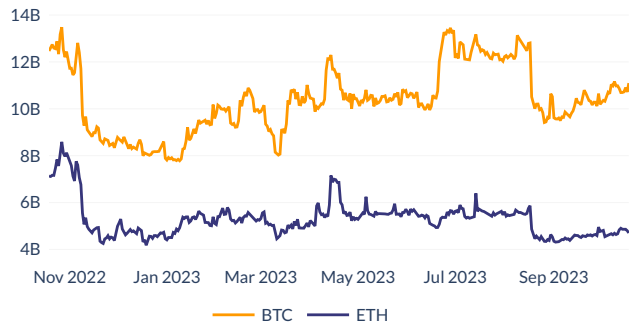
BTC USD
DATED FUTURES BASIS

COINMETRICS

BINANCE   BITMEX   BYBIT   DERIBIT   KRAKEN   KUCOIN   OKEX
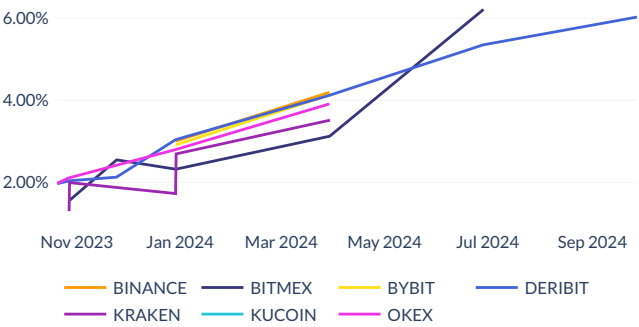
OPEN INTEREST

Sum of all reported open interest from futures markets in USD

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+2.14%	10,812,905,279	11,095,184,098	10,692,118,878
ETH	-2.73%	4,830,508,554	4,903,133,191	4,704,723,405
XRP	+1.68%	363,028,084	368,948,290	358,375,879
ADA	+1.35%	99,995,022	102,482,604	96,928,228
LINK	-7.59%	140,342,317	145,008,398	133,666,764
CRO	-9.78%	4,338,360	4,952,966	3,951,159
LTC	-0.83%	202,599,584	206,981,045	199,320,331
BCH	+3.17%	211,314,295	223,838,276	205,097,853
UNI	+14.04%	36,788,667	40,671,305	35,308,838

FUTURES VOLUME

USD value of all reported futures volume

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+36.45%	25,634,149,249	67,743,788,266	6,414,424,777
ETH	-26.50%	8,483,000,442	17,270,547,377	3,230,206,636
XRP	-27.99%	745,483,675	1,382,675,905	293,937,707
ADA	-15.05%	156,269,140	291,784,047	86,691,018
LINK	-21.95%	389,965,168	621,702,912	197,482,465
CRO	-67.20%	2,412,050	5,514,203	1,172,646
LTC	-9.18%	288,892,627	651,380,518	107,388,923
BCH	+38.73%	658,912,961	1,660,080,440	204,877,122
UNI	+29.61%	65,845,282	92,708,025	33,469,108

BTC FUTURES FUNDING RATES
1M (2023-10-18)

COINMETRICS
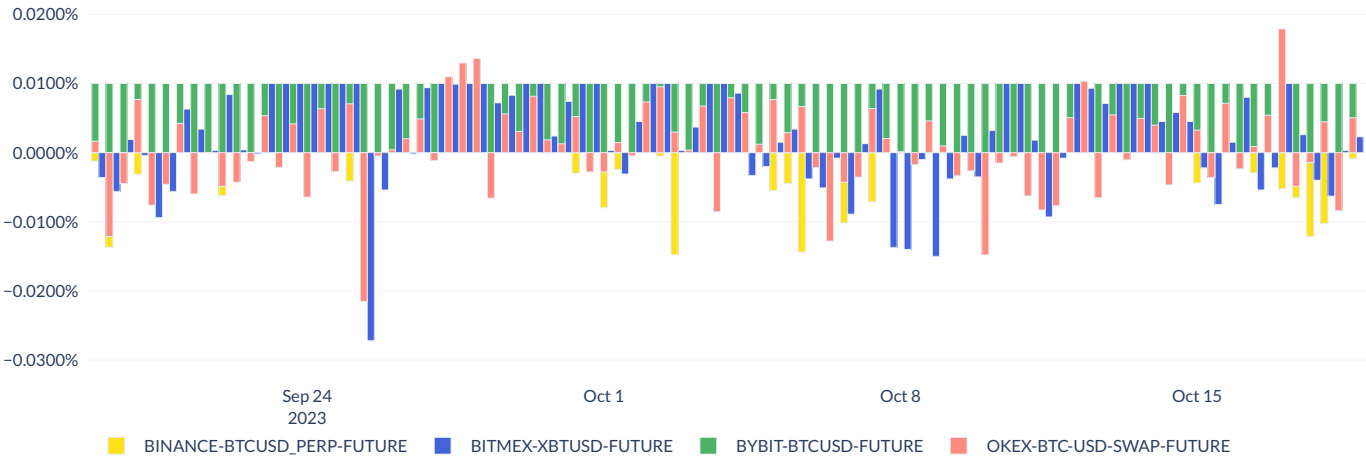
BINANCE-BTCUSD_PERP-FUTURE   BITMEX-XBTUSD-FUTURE   BYBIT-BTCUSD-FUTURE   OKEX-BTC-USD-SWAP-FUTURE

PERP OPEN INTEREST, 7 DAY TREND

COINMETRICS

BTC

ETH

NON-PERP OPEN INTEREST, 7 DAY TREND

COINMETRICS

BTC

ETH
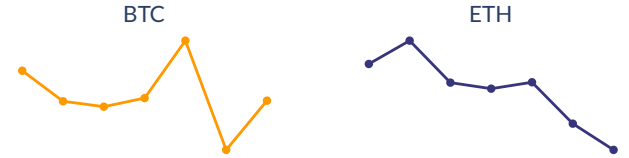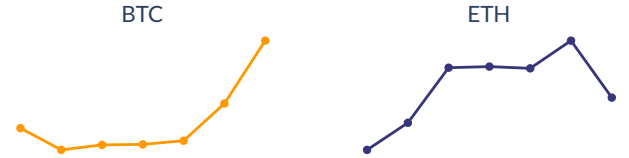
OPTIONS SNAPSHOT

BTC OPEN INTEREST

TOTAL	$8,903,041,235
CALLS	$6,229,162,043
PUTS	$2,673,879,191

ETH OPEN INTEREST

TOTAL	$5,458,711,764
CALLS	$4,087,395,688
PUTS	$1,371,316,076

BTC IMPLIED VOLATILITY VS. STRIKE PRICE (2023-10-18)

COINMETRICS

Legend: OCT 19, 2023 — OCT 20, 2023 — OCT 21, 2023 — OCT 22, 2023 — OCT 27, 2023 — NOV 03, 2023 — NOV 10, 2023
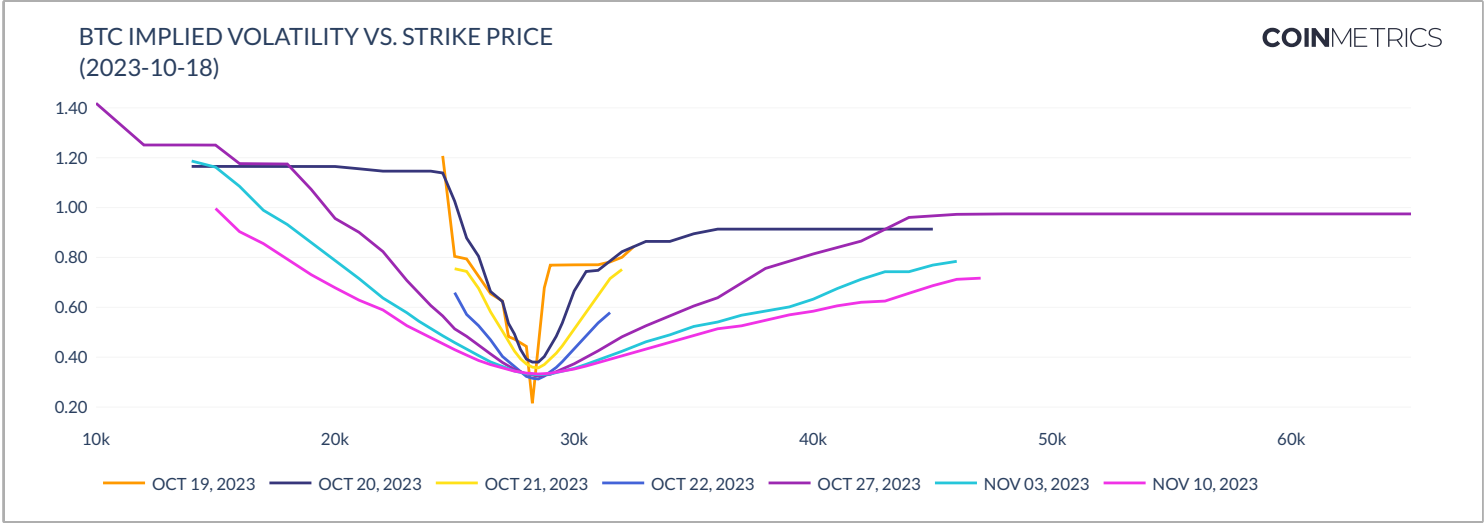
AT THE MONEY OPTIONS

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
9.28658	-61.92484	1.4561	0.65778	0.00036	0.4224	0.0293	BTC-19OCT23-27500	0	0.4224	0.00036	-0.34222	-0.80365	-61.92484	9.28658
9.9626	-66.43268	1.2497	0.56237	0.00039	0.3912	0.0206	BTC-19OCT23-27750	0.0002	0.3912	0.00039	-0.43763	-1.03059	-66.43268	9.9626
10.04501	-66.98221	1.0345	0.464	0.00039	0.3224	0.0121	BTC-19OCT23-28000	0.0006	0.3225	0.00039	-0.53606	-1.26648	-66.98089	10.04481
9.53354	-63.57164	0.82403	0.36856	0.00037	0.2849	0.005	BTC-19OCT23-28250	0.0022	0.2849	0.00037	-0.63144	-1.49735	-63.57164	9.53354
24.61488	-22.37787	5.5634	0.37215	0.00015	0.3873	0.0303	BTC-20OCT23-27500	0.0011	0.3873	0.00015	-0.62789	-11.01217	-22.37669	24.61358
5.33964	-51.46154	1.12777	0.81645	0.00037	0.3424	0.022	BTC-20OCT23-27750	0.0017	0.3424	0.00037	-0.18355	-0.265	-51.4609	5.33957
22.79801	-20.72612	4.58436	0.30515	0.00013	0.3102	0.0145	BTC-20OCT23-28000	0.0031	0.3102	0.00013	-0.69489	-12.29251	-20.72456	22.79629
7.86376	-71.44828	0.80711	0.57849	0.00058	0.3046	0.0087	BTC-20OCT23-28250	0.0061	0.3046	0.00058	-0.42152	-0.61077	-71.44846	7.86378
6.20174	-41.35453	1.88562	0.8433	0.00023	0.3515	0.0313	BTC-21OCT23-27500	0.0021	0.3515	0.00023	-0.1567	-0.37413	-41.35453	6.20174
7.73141	-51.55469	1.74427	0.77593	0.00029	0.3339	0.0238	BTC-21OCT23-27750	0.0033	0.3339	0.00029	-0.22407	-0.53602	-51.55469	7.73141

BTC OPTION OPEN INTEREST (USD) BY EXPIRY MONTH (2023-10-18)

COINMETRICS

Legend: CALL, PUT

ETH OPTION OPEN INTEREST (USD) BY EXPIRY MONTH (2023-10-18)

COINMETRICS

Legend: CALL, PUT

MARKET CAPITALIZATION

MARKET CAPITALIZATION, 7 DAY TREND

BTC   ETH   XRP   ADA   LINK
CRO   LTC   BCH   UNI   FTT
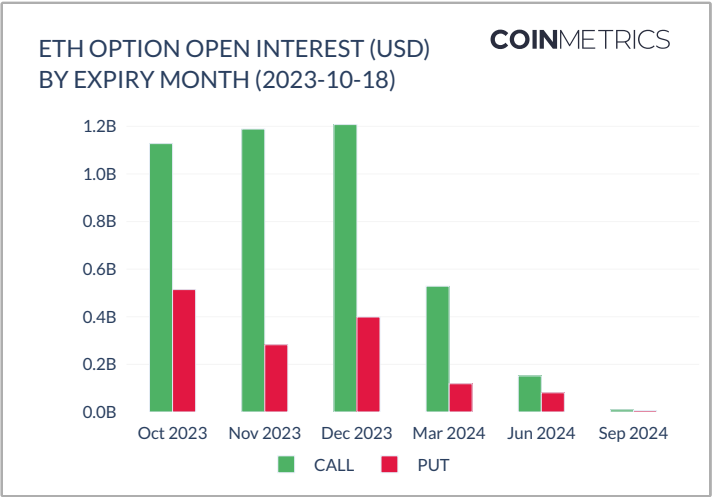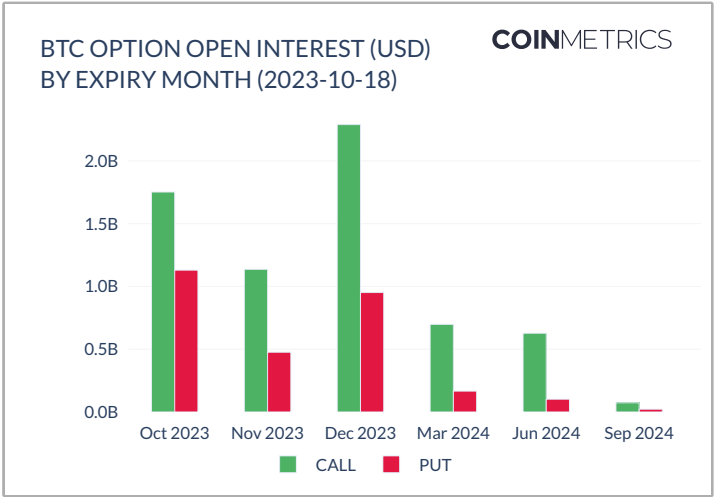
MARKET CAP

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

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+5.96%	537,614,530,286	556,327,162,174	521,774,344,476
ETH	+1.74%	193,164,959,601	198,105,891,418	190,200,436,112
XRP	+1.03%	48,860,834,457	49,805,398,408	48,301,362,807
ADA	-0.88%	8,513,766,137	8,689,150,959	8,398,505,302
LINK	+2.34%	7,347,569,136	7,543,505,385	7,193,581,082
CRO	+0.76%	5,191,274,032	5,268,763,348	5,079,531,397
LTC	-1.46%	4,546,945,214	4,671,803,463	4,439,603,992
BCH	+6.20%	4,314,442,126	4,522,558,252	4,178,600,154
UNI	-1.56%	4,023,733,684	4,131,180,318	3,887,154,058
FTT	-4.10%	341,704,763	347,628,602	331,034,743

FREE FLOAT MARKET CAP

The sum USD value of the free float supply.

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+5.95%	378,026,126,881	391,161,617,349	366,922,540,497
ETH	+1.65%	171,114,922,081	175,445,848,089	168,539,092,878
XRP	+1.18%	23,059,122,161	23,525,504,028	22,781,015,041
ADA	-0.89%	7,581,452,317	7,738,594,775	7,478,888,138
LINK	+2.34%	4,006,041,122	4,112,861,171	3,922,132,031
CRO	+0.75%	492,676,209	500,027,030	482,077,468
LTC	-1.48%	3,845,422,865	3,950,918,531	3,754,222,181
BCH	+6.03%	2,910,132,886	3,052,122,999	2,819,840,466
UNI	-1.56%	999,221,689	1,025,908,168	965,309,964
FTT	-4.10%	341,704,763	347,628,602	331,034,743

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	+0.18%	396,765,810,473	397,151,749,543	396,429,079,057
ETH	-0.13%	147,015,491,230	147,384,634,641	146,842,050,072
XRP	+0.01%	51,678,753,590	51,712,921,989	51,666,062,857
ADA	-0.21%	15,355,523,097	15,372,701,388	15,341,161,333
LINK	+0.07%	8,414,429,255	8,426,252,118	8,408,940,999
CRO	+0.03%	20,511,035,055	20,515,207,481	20,507,448,038
LTC	-0.11%	6,748,668,474	6,751,681,839	6,744,324,248
BCH	+0.11%	4,697,378,023	4,700,299,266	4,695,126,870
UNI	+2.00%	8,358,855,466	8,465,291,351	8,284,723,886
FTT	-0.10%	641,200,414	641,435,220	640,737,192

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	+5.77%	1.35	1.40	1.32
ETH	+1.87%	1.31	1.34	1.29
XRP	+1.02%	0.95	0.96	0.93
ADA	-0.68%	0.55	0.57	0.55
LINK	+2.27%	0.87	0.90	0.86
CRO	+0.72%	0.25	0.26	0.25
LTC	-1.35%	0.67	0.69	0.66
BCH	+6.08%	0.92	0.96	0.89
UNI	-3.50%	0.48	0.49	0.46
FTT	-4.00%	0.53	0.54	0.52

MARKET VALUE TO REALIZED VALUE
1Y (2023-10-18)

BTC ——— ETH

STABLECOINS REPORT

TOTAL STABLECOINS SUPPLY
1Y (2023-10-18)
COINMETRICS

Legend: Tether, USDC, Other Stablecoins
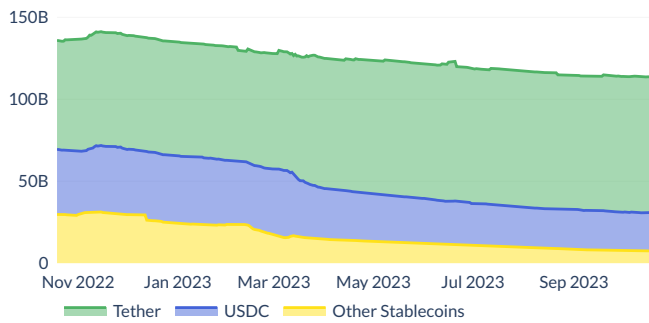
TETHER PREMIUM/DISCOUNT TO USD
1Y (2023-10-18)
COINMETRICS
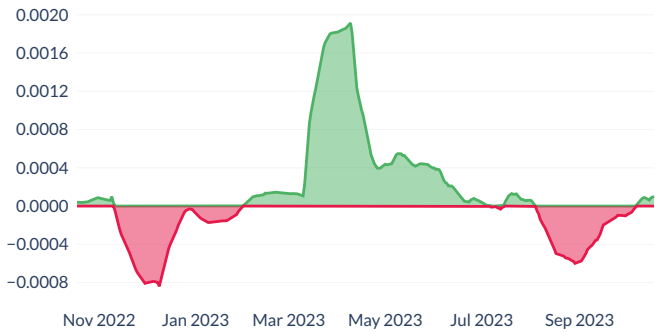
MARKET CAPITALIZATION
USD value of current supply

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USDT_ETH	+0.05%	39,034,957,028	39,056,297,668	39,015,132,071
USDT_OMNI	+0.05%	888,233,386	888,718,988	887,782,272
USDT_TRX	+0.05%	43,841,686,306	43,865,654,813	43,819,420,122
PAX	+0.18%	483,821,420	485,674,098	483,097,965
DAI	+0.18%	3,791,872,147	3,805,321,335	3,778,202,350
USDC	+0.75%	23,297,989,913	23,408,605,233	23,197,000,799
BUSD	-1.67%	2,118,940,532	2,138,170,350	2,102,396,766
GUSD	-0.27%	216,457,364	216,832,489	215,963,212

TRANSFER VALUE, ADJUSTED
USD value of the sum native units transferred removing noise

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USDT_ETH	-15.88%	2,664,739,995	4,296,355,504	1,188,739,834
USDT_OMNI	-98.71%	2,939,158	12,978,057	109
USDT_TRX	+5.72%	8,874,892,487	12,157,699,503	4,626,599,929
PAX	-77.85%	2,967,966	6,028,162	1,334,522
DAI	+171.15%	714,722,856	1,299,896,849	137,646,341
USDC	+22.68%	3,551,861,043	5,638,658,177	1,391,311,004
BUSD	+53.34%	14,281,723	34,401,106	4,737,765
GUSD	+21.33%	1,746,202	3,994,420	392,775

MARKET CAPITALIZATION, 7 DAY TREND
COINMETRICS

USDT_ETH   USDT_OMNI   USDT_TRX   PAX   DAI   USDC   BUSD   GUSD

TRANSFER VALUE, 7 DAY TREND
COINMETRICS

USDT_ETH   USDT_OMNI   USDT_TRX   PAX   DAI   USDC   BUSD   GUSD

TRANSACTION COUNT
Count of transactions

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USDT_ETH	-1.77%	107,140	122,503	81,238
USDT_OMNI	-31.25%	20	32	2
USDT_TRX	-0.71%	1,944,344	2,116,706	1,718,121
PAX	-26.85%	91	113	62
DAI	-7.50%	4,165	5,289	2,863
USDC	-3.43%	38,777	46,380	29,969
BUSD	+10.49%	464	590	334
GUSD	-40.39%	659	1,143	61

MEDIAN TRANSFER VALUE
Median USD value transferred per transfer between addresses

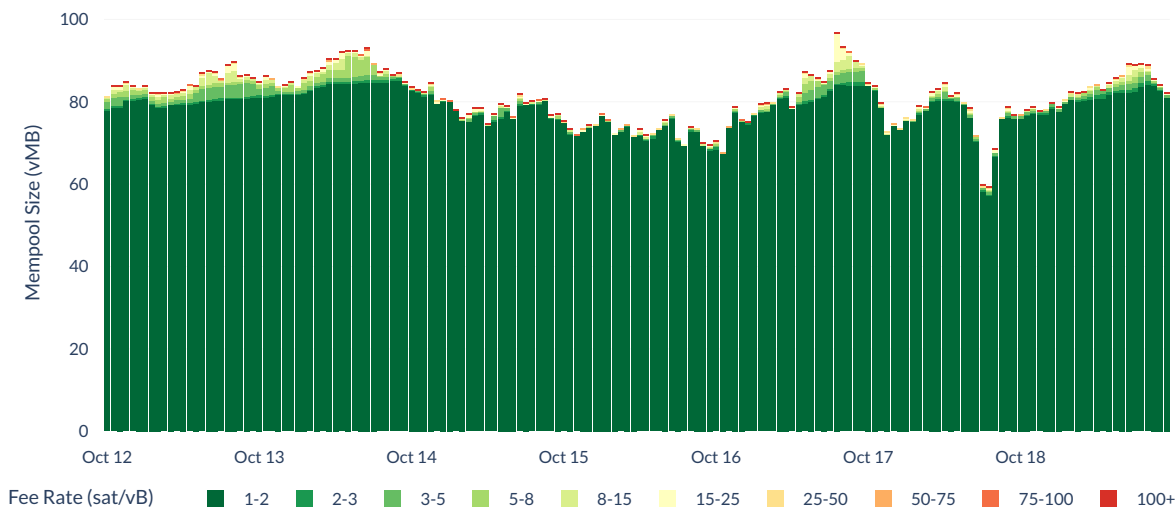| ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USDT_ETH	+0.05%	441	536	240
USDT_OMNI	-96.25%	3,112	19,995	55
USDT_TRX	-3.33%	135	143	126
PAX	+876.25%	2,020	4,980	497
DAI	-40.08%	1,039	1,625	404
USDC	+20.85%	657	1,066	375
BUSD	-28.64%	163	254	109
GUSD	-3.24%	88	225	49

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
USDT_ETH	+0.05%	38.34	38.38	38.31
USDT_OMNI	+18.93%	32.93	36.28	30.40
USDT_TRX	+0.56%	73.48	73.72	73.31
PAX	-0.13%	36.96	37.00	36.95
DAI	-1.32%	129.46	130.79	128.43
USDC	-1.16%	112.95	113.70	112.22
BUSD	-0.29%	71.41	71.66	71.17
GUSD	-6.95%	24.05	24.62	22.91

FEE MARKET

BTC MEMPOOL SIZE VS. FEE RATES (2023-10-18)

Mempool Size (vMB)

Fee Rate (sat/vB)

| ■ 1-2 | ■ 2-3 | ■ 3-5 | ■ 5-8 | ■ 8-15 | ■ 15-25 | ■ 25-50 | ■ 50-75 | ■ 75-100 | ■ 100+ |

BTC RECOMMENDED FEE RATE (1H AVERAGE)

sat/vB

BTC FEE TRENDS

AVG. USD FEE

MED. USD FEE

AVG. FEE / BYTE

AVG. FEE / WEIGHT
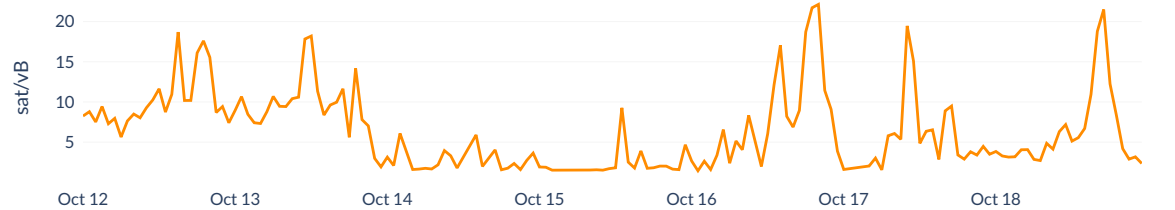
ETH FEE TRENDS

AVG. USD FEE

MED. USD FEE

DAILY GAS USED

AVG. GAS USE / TX

ETH TRANSACTION COUNT PER BLOCK (1H AVERAGE)

Tx Count
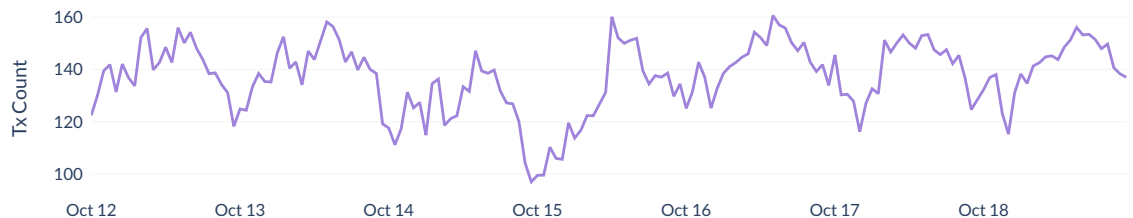
ETH BASE & PRIORITY FEES (1H AVERAGE)

Gas Price (Gwei)

| ■ Base Fee | ■ Priority Fee |
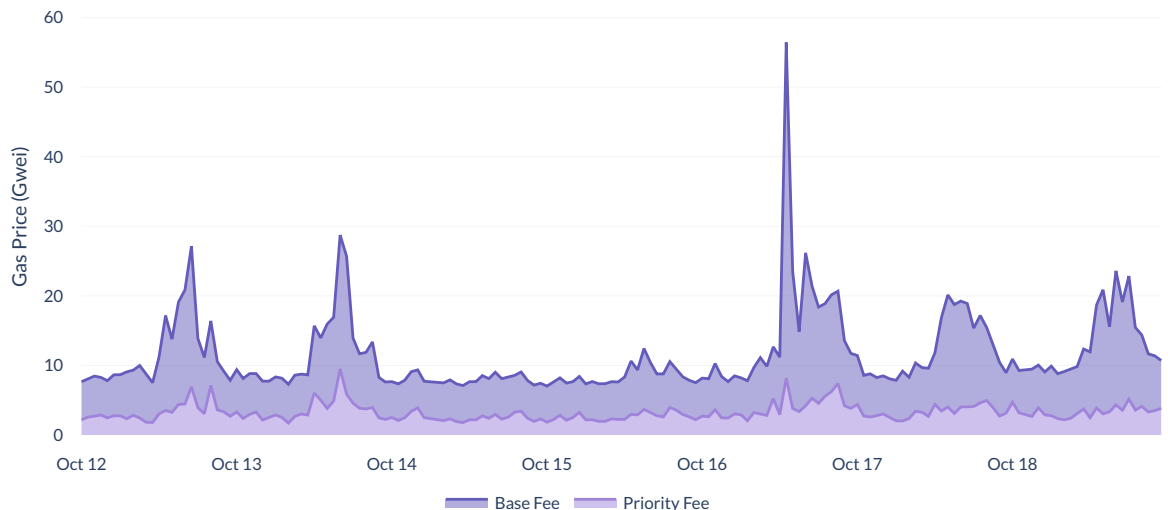
NETWORK DATA FUNDAMENTALS

NVT RATIO (90D MA)
1Y (2023-10-18)

COINMETRICS

BTC — ETH

ACTIVE ADDRESSES
Count of unique addresses that were active in the network

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+2.26%	900,034	1,018,543	795,940
ETH	-7.35%	474,764	509,671	443,138
XRP	+65.50%	24,682	37,851	20,159
ADA	+4.58%	33,428	39,003	26,620
LINK	+1.03%	2,642	3,809	2,102
CRO	-49.02%	364	563	274
LTC	-6.05%	214,598	226,213	201,133
BCH	-88.42%	82,250	239,355	25,689
UNI	+31.84%	1,011	1,331	764
FTT	-10.32%	91	126	53

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%	13,721,860	13,723,126	13,721,012
ETH	+0.01%	109,588,509	109,598,817	109,576,086
XRP	+0.15%	47,187,691,988	47,229,310,839	47,154,849,521
ADA	+0.15%	30,728,257,423	30,757,909,327	30,705,141,244
LINK	-0.00%	545,219,952	545,226,638	545,218,203
CRO	-0.00%	9,490,468,597	9,490,589,391	9,490,400,738
LTC	+0.01%	62,385,227	62,387,363	62,382,273
BCH	-0.13%	13,174,961	13,182,436	13,159,286
UNI	+0.00%	248,331,972	248,333,343	248,330,543
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	+0.99%	276,416	298,000	258,142
ETH	+0.66%	981,735	1,027,904	898,577
XRP	-26.80%	837,321	1,114,973	752,547
ADA	-2.21%	57,710	68,715	52,311
LINK	+4.71%	3,363	4,474	2,585
CRO	-72.67%	509	1,189	325
LTC	-2.22%	108,756	117,839	104,418
BCH	-94.83%	69,202	227,117	11,745
UNI	+33.77%	1,176	1,735	832
FTT	+30.94%	117	182	49

TRANSFER VALUE, ADJUSTED
USD value of the sum native units transferred removing noise

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+37.32%	3,468,849,950	4,947,114,445	2,023,008,687
ETH	+15.40%	1,870,448,009	2,534,366,165	1,066,409,749
XRP	-4.30%	467,761,580	816,591,927	190,973,598
ADA	-3.26%	3,744,976,343	4,017,262,844	3,274,286,078
LINK	-20.44%	68,142,087	157,359,210	22,667,927
CRO	-58.00%	8,060,017	26,161,193	797,148
LTC	-3.79%	50,495,496	71,859,067	35,343,321
BCH	+41.53%	20,098,227	43,163,616	9,981,473
UNI	-28.64%	24,678,742	89,240,451	2,725,302
FTT	+127.84%	1,137,730	2,583,738	171,451

ADDRESSES ≥ $1
Count of addresses holding at least $1 worth of native units

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+0.28%	40,561,179	40,638,964	40,465,320
ETH	+0.42%	58,478,803	58,915,480	58,267,008
XRP	+0.12%	4,821,615	4,824,633	4,818,615
ADA	-0.04%	3,529,636	3,545,017	3,524,739
LINK	+0.10%	535,816	536,151	535,498
CRO	+0.06%	149,675	149,839	149,475
LTC	+0.39%	2,317,137	2,326,268	2,304,244
BCH	+1.22%	4,510,431	4,552,349	4,481,044
UNI	+0.29%	285,796	286,319	285,262
FTT	-0.47%	21,495	21,533	21,417

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

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
BTC	+2.25%	71,974	72,905	71,130
ETH	+1.06%	8,964	9,115	8,881
XRP	+1.01%	1,096	1,111	1,084
ADA	-0.98%	717	737	705
LINK	+2.71%	451	460	442
CRO	+0.00%	23	23	23
LTC	-0.98%	412	420	405
BCH	+3.32%	337	347	331
UNI	-1.54%	266	274	254
FTT	+0.00%	12	13	12

COINMETRICS
ACTIVE ADDRESSES, 7 DAY TREND

BTC ETH
XRP ADA
LINK CRO
LTC BCH
UNI FTT
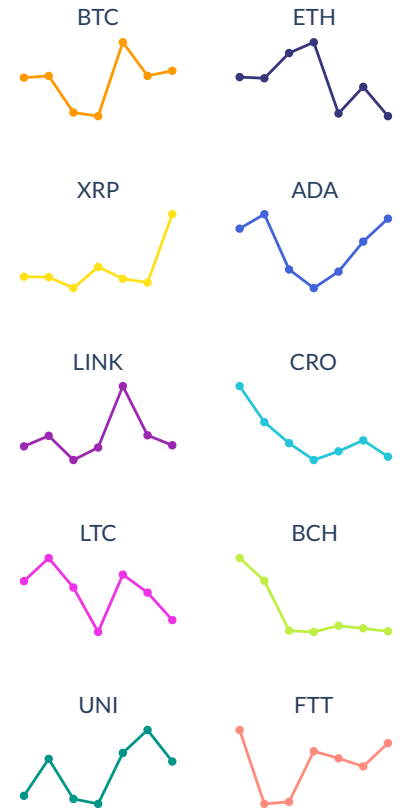
COINMETRICS
TRANSFER VALUE, 7 DAY TREND

BTC ETH
XRP ADA
LINK CRO
LTC BCH
UNI FTT
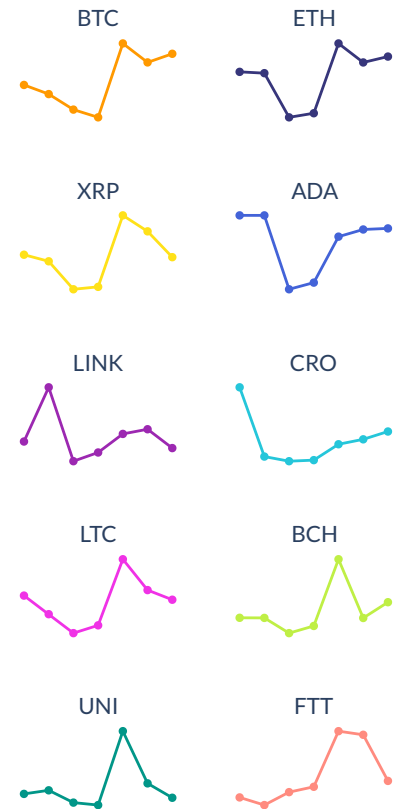
ESTIMATED MARKET CAPITALIZATION (MARKET CAP)

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
- **CMBISCPE:** 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 10/15/2023 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 10/15/2023 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.

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.

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 liqudity 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 a 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.

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.

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 addresses 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 ≥ $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 ≥ $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.