STATE OF THE MARKET

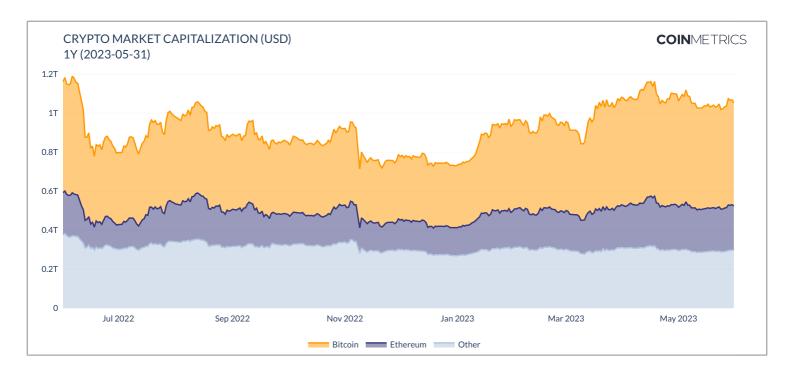
MAY 25 - 31, 2023

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



MARKET SUMMARY

The House of Representatives is hurriedly patching over cracks and crevices in the Federal budget, suspending the U.S. debt ceiling in a last-minute agreement late Wednesday night. The bipartisan bill still seeks approval from a Democrat-controlled Senate, but President Biden urged the upper chamber to pass the measure as "quickly as possible," with the default deadline looming just 5 days away. As Congress kicks the fiscal responsibility can, the Federal Reserve signals a willingness to suspend their own monetary tightening tenure. On Wednesday afternoon, Philadelphia Fed President Patrick Harker noted that "skipping a rate hike" during the upcoming June meeting would allow the central bank to "see more data." The cautious commentary pushed the perceived likelihood of a rate hike pause to around 62% (according to CME's FedWatch Tool), though Harker reiterated a pause didn't necessarily imply the Fed had reached the "peak rate for this cycle." With a debt ceiling raise and a rate hike pause on the table, commodities saw incremental upside, with gold ticking up 0.2% and silver following suit. Unfortunately for crypto, similar sentiments are yet to trickle over into the digital asset space. Bitcoin (BTC) and Ether (ETH) are essentially flat week-over-week, with 30D price volatility reaching historic lows as waning retail interest and persistent regulatory uncertainty continue to erode sector liquidity. Following Binance's exit from Canada in early May, crypto exchange Bybit announced they'd made a "difficult but necessary decision" to suspend their operations in the region. After their acquisition by TD Bank in March, investment bank Cowen shared they'd be shedding their digital asset unit, though a statement from the team hints they hope to revitalize the full-service crypto offering "in a different home." With crypto businesses closing their doors across North America, Coinbase CEO Brian Armstrong took to an opinion column to express grave concerns, penning an editorial in MarketWatch warning democratic nations about their most "ambitious adversary," China. Armstrong noted that Hong Kong is now positioning itself as a digital asset hub, and claims that "restrictive" rules in the U.S. have forced crypto innovators offshore and into the arms of their fiercest sovereign rival. Crypto activity in Hong Kong is indeed picking up steam, with a new 'Hong Kong Virtual Assets Consortium' (HKVAC) establishing itself as a regional ratings & index service just as retail trading regulations officially go live on June 1st. Seychelles-based exchange Huobi is among the first members of the HKVAC consortium, announcing their enrollment in the organization as part of an overarching objective to "develop a venture capital database" catering to the needs of the Hong Kong crypto market. As America grapples with escalating debt and a precarious interest rate impasse, China's strategic advances in the crypto economy stand in stark contrast—a testament to the changing nature of what it takes to assert dominance as a global financial superpower.

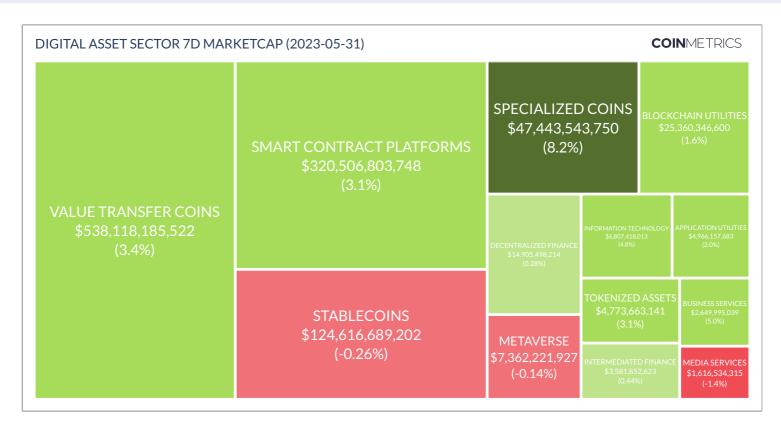


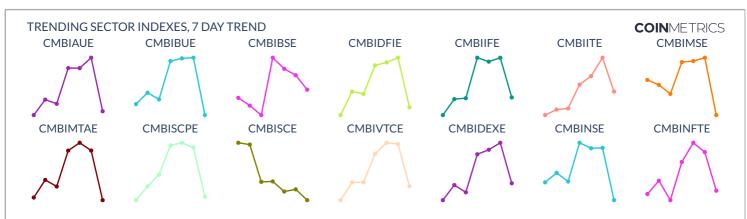
PRICE (CMBI CONSTITUENTS)

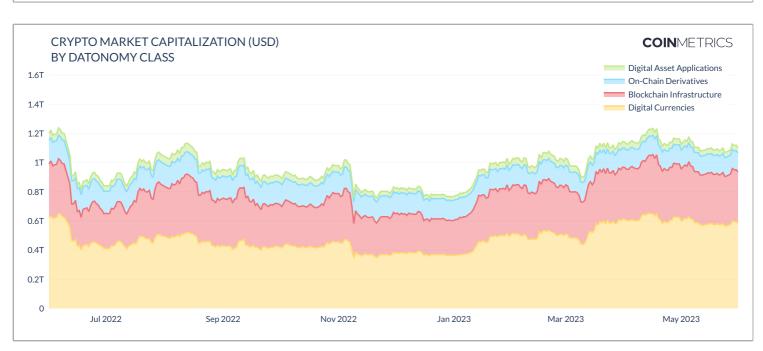
Coin Metrics' Reference Rate price calculated using a transparent, independent methodology robust to manipulation and derived from high quality constituent markets. Data based on 4pm EST NYC close.

ASSET	CLOSING PRICE	7D CHANGE	7D MAX	7D MIN	52W CHANGE	52W MAX	52W MIN
втс	\$27,057.81	+2.20%	\$27,828.79	\$26,474.36	-10.37%	\$31,347.97	\$15,799.60
ETH	\$1,865.82	+3.09%	\$1,907.74	\$1,809.83	+2.95%	\$2,129.88	\$923.00
SOL	\$20.67	+6.97%	\$21.35	\$19.32	-48.64%	\$46.47	\$8.35
DOT	\$5.30	+0.63%	\$5.47	\$5.26	-45.87%	\$9.79	\$4.27
ADA	\$0.38	+4.73%	\$0.38	\$0.36	-35.30%	\$0.65	\$0.24
DOGE	\$0.07	+1.15%	\$0.07	\$0.07	-12.66%	\$0.14	\$0.05
MATIC	\$0.89	-0.53%	\$0.93	\$0.89	+45.96%	\$1.52	\$0.34
BNB	\$305.98	+0.31%	\$312.94	\$305.05	+0.46%	\$353.50	\$189.63
AVAX	\$14.07	-0.63%	\$14.67	\$14.07	-41.75%	\$29.19	\$10.78
ATOM	\$10.51	-0.08%	\$10.85	\$10.51	+10.36%	\$16.65	\$5.73
CMBI10	\$2,977.76	+2.38%	\$3,054.82	\$2,908.44	-9.39%	\$3,398.54	\$1,838.40

ASSET CLASSES







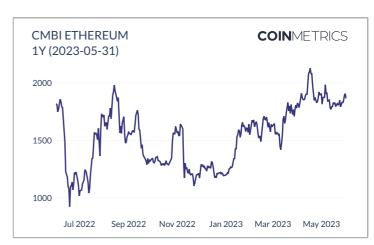
INDEX ROUNDUP

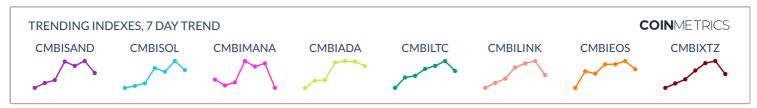
SINGLE ASSET INDEXES

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
СМВІВТС	\$27,058.20	+2.20%	\$27,829.52	\$26,475.95	-10.37%	\$31,347.97	\$15,799.60
СМВІВТСТ	\$29,071.01	+2.20%	\$29,899.72	\$28,445.45	-10.37%	\$33,679.90	\$16,974.91
СМВІЕТН	\$1,865.85	+3.09%	\$1,907.78	\$1,809.96	+2.95%	\$2,129.88	\$923.00
СМВІЕТНТ	\$2,025.56	+3.09%	\$2,071.07	\$1,964.88	+2.95%	\$2,312.19	\$1,002.00



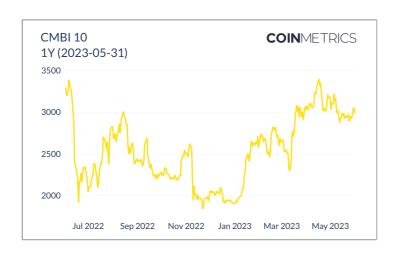




MULTI ASSET INDEXES

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

INDEX	CLOSING PRICE	7D CHANGE	7D MAX	7D MIN	52W CHANGE	52W MAX	52W MIN
CMBI10	\$2,977.76	+2.38%	\$3,054.82	\$2,908.44	-9.39%	\$3,398.54	\$1,838.40
CMBI10E	\$4,811.26	+1.78%	\$4,928.50	\$4,726.90	-26.55%	\$6,768.61	\$3,409.70
CMBI10EX	\$6,879.32	+2.62%	\$7,033.47	\$6,703.53	-7.50%	\$7,991.44	\$4,169.19
CMBI10M	\$10,214.63	+0.00%	\$10,214.63	\$10,214.63	-34.15%	\$16,189.37	\$9,310.27
CMBIBE	\$14,297.92	+2.52%	\$14,674.73	\$13,946.73	-6.22%	\$16,180.78	\$8,387.96





MARKET MOVEMENT

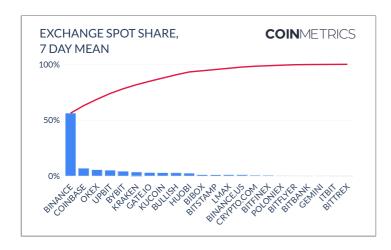
TRADING DIARY, 7 DAY

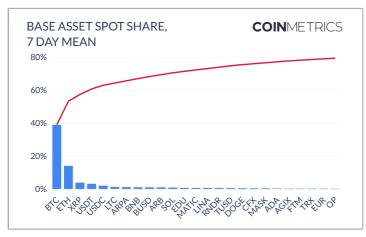
ADVANCING VOLUME \$82,750,216,289

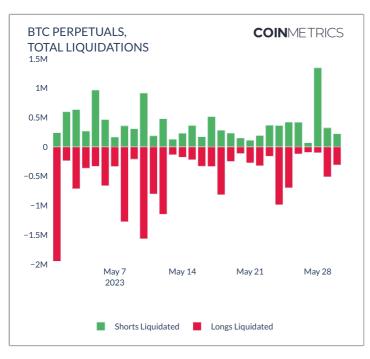
DECLINING VOLUME \$11,852,775,419

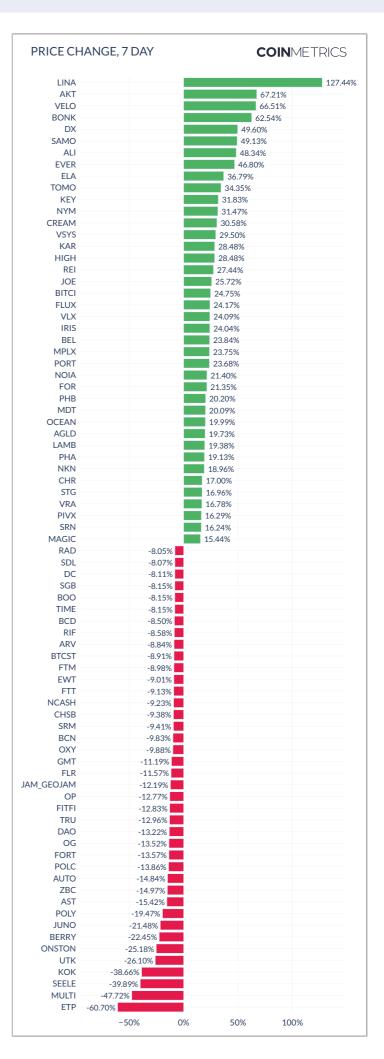
ADVANCES 343

DECLINES 305

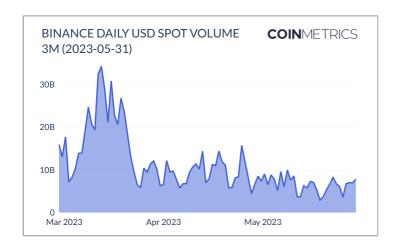


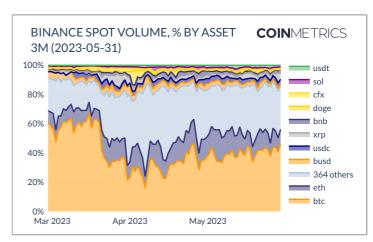


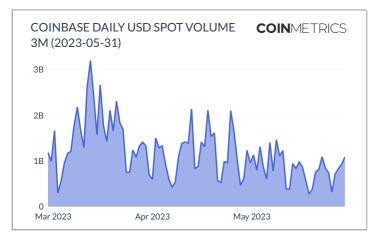


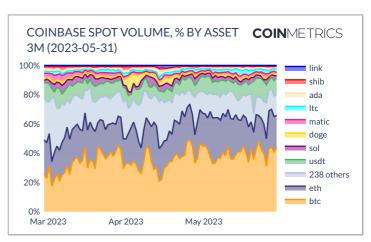


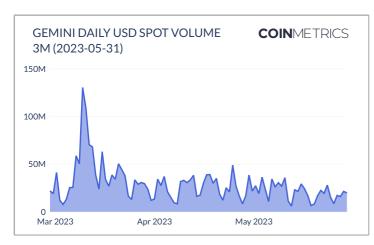
EXCHANGE SPOT VOLUME

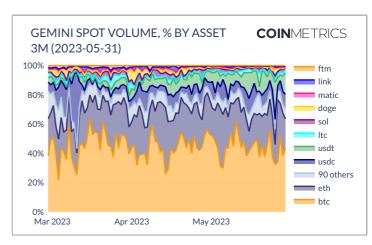


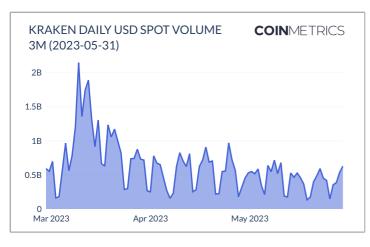


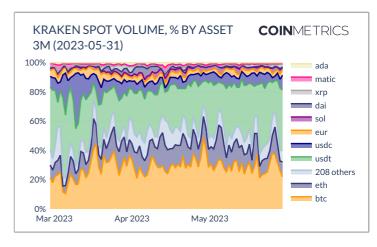




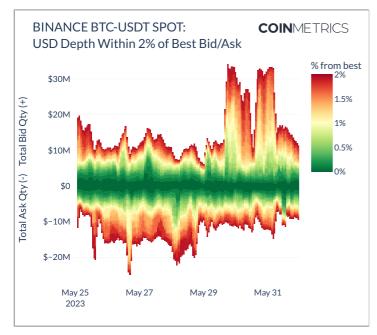


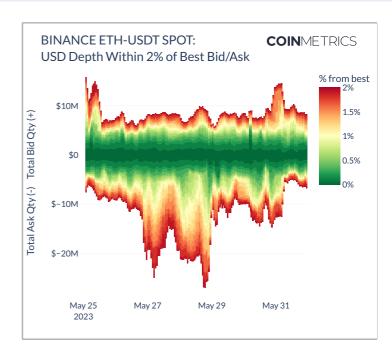


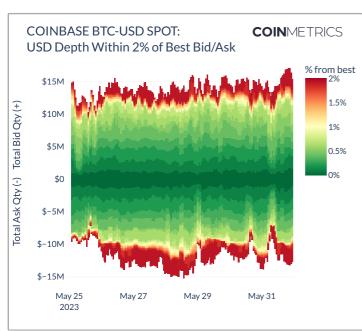


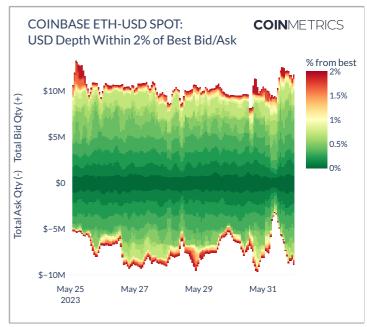


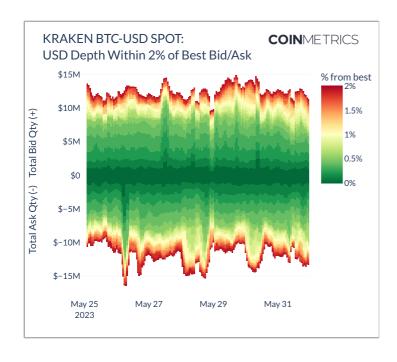
ORDER BOOK DEPTH

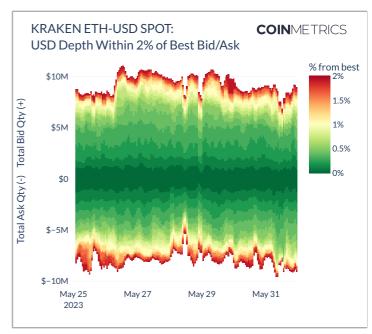




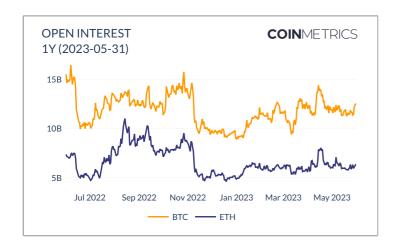


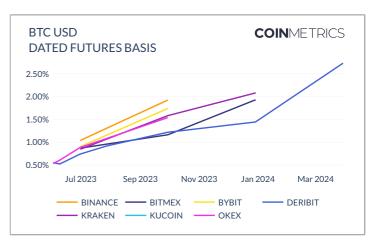






FUTURES FEED





OPEN INTEREST

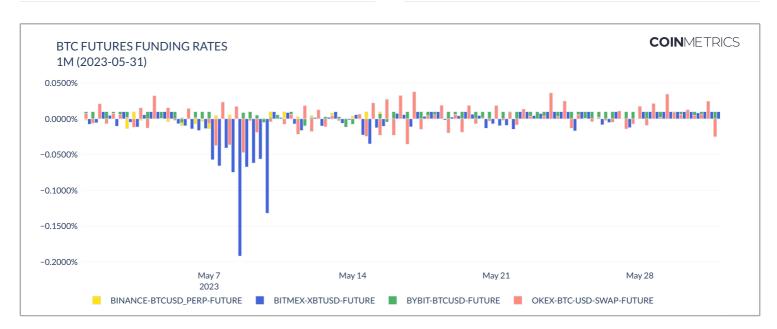
Sum of all reported open interest from futures markets in USD

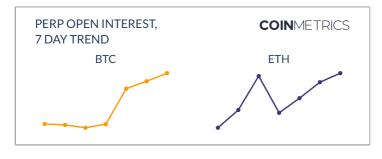
ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	+7.61%	11,908,074,038	12,565,013,827	11,374,933,100
ETH	+8.84%	6,146,662,622	6,386,931,917	5,868,306,363
XRP	+20.41%	599,356,825	677,813,862	562,901,359
ADA	+7.97%	210,981,012	218,695,703	202,244,716
LTC	+9.04%	522,030,244	535,134,046	490,779,605
LINK	-1.23%	114,588,545	117,079,236	112,789,617
CRO	-16.09%	4,640,963	5,227,521	4,312,092
UNI	-4.85%	39,147,672	40,193,214	37,657,644
ВСН	-3.36%	127,091,078	130,078,485	124,607,423

FUTURES VOLUME

USD value of all reported futures volume

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	+19.66%	21,974,251,923	28,931,962,863	8,827,884,502
ETH	-3.00%	11,029,238,306	13,557,472,621	5,238,760,942
XRP	+233.82%	1,454,170,913	3,112,336,398	676,076,417
ADA	-15.65%	246,930,684	343,554,835	138,116,765
LTC	-0.52%	773,325,589	918,939,175	446,912,396
LINK	+2.18%	153,028,987	175,382,222	103,437,086
CRO	-45.42%	2,193,723	4,073,295	921,483
UNI	+30.90%	48,445,094	66,997,097	34,034,189
ВСН	-0.52%	61,167,013	74,465,776	36,056,109





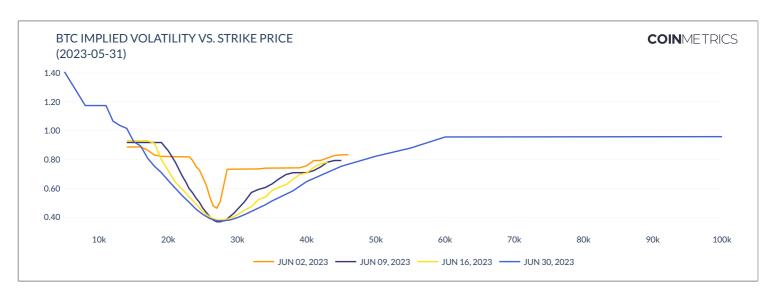


OPTIONS SNAPSHOT

BTC OPEN INTEREST

ETH OPEN INTEREST

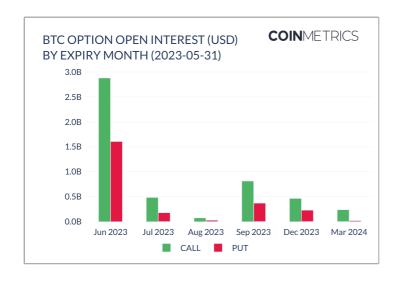
TOTAL	\$7,360,608,596	TOTAL	\$4,844,513,941
CALLS	\$4,974,369,463	CALLS	\$3,501,752,580
PUTS	\$2,386,239,133	PUTS	\$1,342,761,360

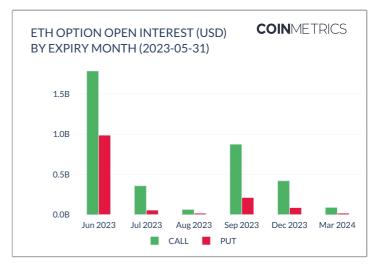


AT THE MONEY OPTIONS

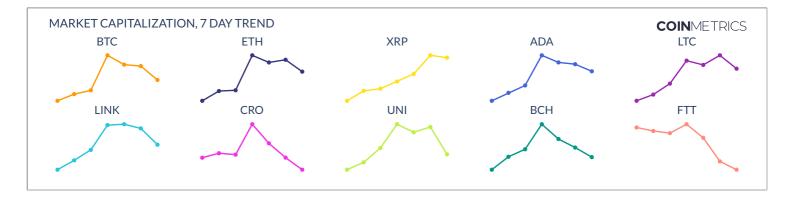
Market greeks, implied volatility, and mark contract prices for BTC options at or near strike price.

			CALLS								PUTS	;		
VEGA	THETA	RHO	DELTA	GAMMA	IV	MARK	SYMBOL	MARK	IV	GAMMA	DELTA	RHO	THETA	VEGA
26.40529	-33.00766	8.48926	0.57509	0.00011	0.4342	0.0151	BTC-2JUN23-27000	0.0068	0.4341	0.00011	-0.42451	-7.77763	-33.00582	26.40382
26.84676	-33.55951	7.75535	0.52172	0.00011	0.4216	0.006	BTC-2JUN23-27500	0.016	0.4216	0.00011	-0.47868	-8.82615	-33.55675	26.84455
26.40071	-33.00193	8.50937	0.57631	0.00011	0.3971	0.0286	BTC-9JUN23-27000	0.0195	0.3971	0.00011	-0.42387	-7.76697	-33.00277	26.40139
26.85122	-33.56508	7.76912	0.52255	0.00011	0.3907	0.0193	BTC-9JUN23-27500	0.0286	0.3907	0.00011	-0.47762	-8.80863	-33.56391	26.85028
25.20819	-31.51123	6.1595	0.43078	0.00011	0.4072	0.038	BTC-16JUN23-27000	0.0288	0.4072	0.00011	-0.56919	-10.11349	-31.51196	25.20877
24.39235	-30.4914	5.43775	0.3782	0.00011	0.4018	0.0287	BTC-16JUN23-27500	0.0378	0.4018	0.00011	-0.62183	-11.13752	-30.49038	24.39154
83.62923	-12.05423	64.12944	0.61796	0.00002	0.3902	0.0488	BTC-30JUN23-27000	0.0393	0.3903	0.00002	-0.38204	-192.47228	-12.05423	83.62923
53.66004	-16.03981	37.39998	0.65567	0.00005	0.3991	0.0682	BTC-28JUL23-27000	0.0575	0.3991	0.00005	-0.34427	-30.65029	-16.03951	53.65905
52.48291	-15.66427	27.44946	0.51237	0.00006	0.4085	0.0844	BTC-25AUG23-27000	0.0723	0.4084	0.00006	-0.4876	-40.60375	-15.66654	52.48343
76.98351	-8.8715	54.36438	0.47394	0.00004	0.4277	0.104	BTC-29SEP23-27000	0.0904	0.4277	0.00004	-0.52606	-131.12912	-8.8715	76.98351





MARKET CAPITALIZATION



MARKET CAP

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

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	+2.80%	528,565,357,425	544,710,821,944	513,370,789,092
ETH	+3.72%	227,246,780,955	233,036,462,028	220,244,216,346
XRP	+14.25%	48,719,392,588	52,178,767,653	45,365,565,705
ADA	+4.48%	12,697,594,788	13,082,634,999	12,237,553,740
LTC	+4.81%	6,549,413,109	6,740,264,196	6,310,373,950
LINK	+3.24%	6,492,632,438	6,646,798,728	6,277,210,947
CRO	-0.81%	6,025,436,111	6,136,192,665	5,951,474,164
UNI	+1.37%	5,054,808,909	5,148,072,725	4,947,842,552
ВСН	+1.15%	2,212,764,986	2,261,996,637	2,171,934,654
FTT	-6.75%	328,342,647	337,157,637	312,786,549

FREE FLOAT MARKET CAP

The sum USD value of the free float supply.

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	+2.78%	375,355,015,842	386,818,848,193	364,602,773,262
ETH	+3.68%	208,193,601,039	213,515,822,278	201,804,774,888
XRP	+14.24%	22,222,154,256	23,799,572,238	20,692,951,180
ADA	+4.71%	11,220,540,825	11,554,170,881	10,806,485,363
LTC	+4.41%	5,637,582,424	5,793,083,101	5,437,869,486
LINK	+3.24%	3,287,263,671	3,365,330,577	3,178,217,772
CRO	-2.71%	700,583,351	718,480,219	683,498,606
UNI	+1.38%	1,214,080,824	1,236,462,442	1,188,355,628
ВСН	+1.15%	1,496,797,226	1,530,015,323	1,469,225,275
FTT	-6.75%	316,734,624	325,237,974	301,728,487

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
втс	+0.14%	391,445,967,226	391,747,325,110	391,198,492,799
ETH	+0.70%	163,438,455,998	163,950,583,648	162,526,495,455
XRP	+0.86%	49,308,982,466	49,526,284,183	49,104,338,318
ADA	+0.30%	17,954,602,231	18,005,606,630	17,929,689,220
LTC	+0.40%	6,937,124,083	6,952,461,529	6,899,772,301
LINK	+0.08%	8,244,590,254	8,250,741,510	8,237,350,175
CRO	+0.17%	22,322,848,267	22,346,090,015	22,308,223,457
UNI	-0.34%	8,709,628,831	8,719,439,011	8,681,169,150
ВСН	-0.23%	4,272,828,903	4,277,843,162	4,268,054,066
FTT	-0.52%	883,258,056	884,034,496	879,326,038

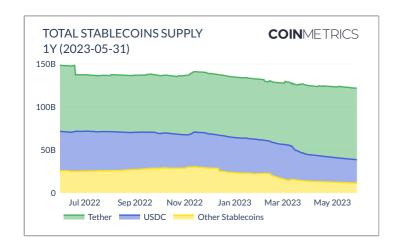
MARKET VALUE TO REALIZED VALUE

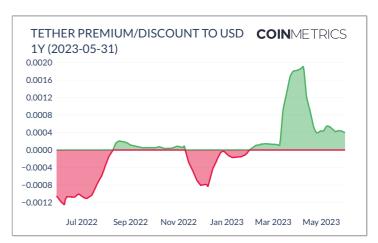
The ratio of a cryptoasset's market cap (aka market value) to realized cap (aka realized value).

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	+2.65%	1.35	1.39	1.31
ETH	+3.00%	1.39	1.42	1.36
XRP	+13.27%	0.99	1.05	0.92
ADA	+4.17%	0.71	0.73	0.68
LTC	+4.39%	0.94	0.97	0.91
LINK	+3.16%	0.79	0.81	0.76
CRO	-0.98%	0.27	0.28	0.27
UNI	+1.71%	0.58	0.59	0.57
всн	+1.38%	0.52	0.53	0.51
FTT	-6.26%	0.37	0.38	0.36



STABLECOINS REPORT





MARKET CAPITALIZATION

USD value of current supply

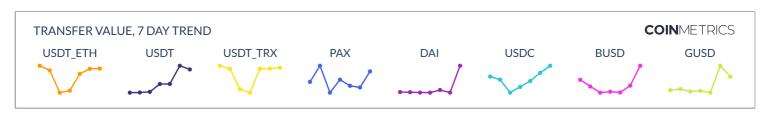
ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USDT_ETH	+0.02%	36,291,281,063	36,296,995,612	36,284,515,563
USDT	+0.02%	888,198,054	888,337,912	888,032,474
USDT_TRX	+0.02%	46,142,930,006	46,150,195,829	46,134,327,940
PAX	-0.12%	1,017,543,363	1,018,519,504	1,016,199,422
DAI	-0.05%	4,623,143,173	4,628,585,356	4,618,915,235
USDC	-0.64%	27,343,874,803	27,410,640,439	27,205,081,776
BUSD	-2.03%	5,265,448,617	5,302,991,694	5,195,589,932
GUSD	-0.55%	574,025,642	575,367,587	571,285,828

TRANSFER VALUE, ADJUSTED

USD value of the sum native units transferred removing noise

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USDT_ETH	-6.98%	2,532,356,737	3,361,151,427	1,149,979,101
USDT	+12,788.84%	225,732	614,405	4,125
USDT_TRX	-3.88%	8,472,918,076	10,255,787,571	4,776,134,755
PAX	+36.90%	111,003,470	166,878,184	66,059,801
DAI	+2,327.57%	805,128,682	4,476,086,667	90,307,963
USDC	+40.76%	2,798,926,596	4,409,814,037	1,225,914,917
BUSD	+94.73%	39,916,060	118,033,999	8,461,933
GUSD	+242.45%	1,974,207	5,603,234	598,597





TRANSACTION COUNT

Count of transactions

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USDT_ETH	-0.40%	88,686	102,230	66,566
USDT	+916.67%	27	74	2
USDT_TRX	+10.27%	1,997,817	2,213,542	1,689,389
PAX	+12.14%	123	157	62
DAI	-8.94%	4,001	5,046	3,445
USDC	+5.71%	30,486	37,861	23,326
BUSD	+1.45%	473	558	325
GUSD	+77.59%	59	103	30

MEDIAN TRANSFER VALUE

Median USD value transferred per transfer between addresses

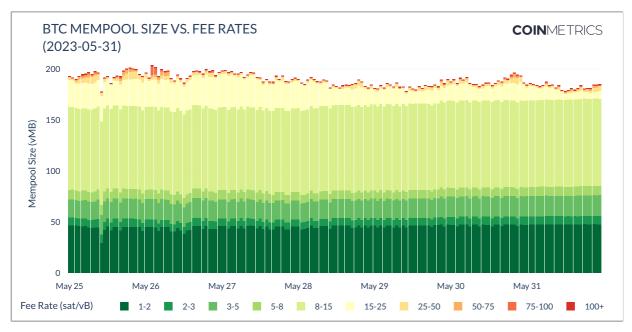
ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
USDT_ETH	+24.49%	723	900	501
USDT	-84.36%	1,661	6,663	45
USDT_TRX	-33.32%	115	150	100
PAX	+126.08%	112,676	459,305	13,991
DAI	+11.55%	1,173	1,419	929
USDC	+21.84%	1,098	1,462	730
BUSD	+34.63%	372	592	199
GUSD	+225.36%	2,902	5,709	250

VELOCITY

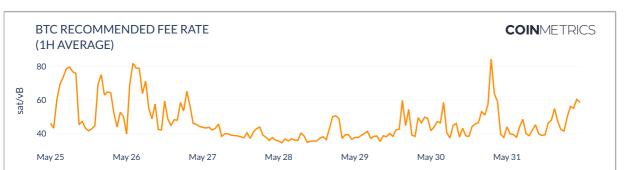
Number of times that an average native unit among the active supply has been transferred in the past 1 year $\,$

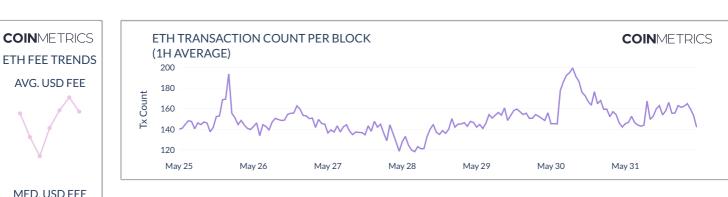
ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN	
USDT_ETH	-0.15%	38.74	38.79	38.67	
USDT	-0.12%	3.02	3.02	3.02	
USDT_TRX	+0.45%	60.26	60.43	60.15	
PAX	+2.81%	15.43	15.61	15.16	
DAI	-0.29%	267.02	267.97	265.61	
USDC	+0.56%	126.00	126.74	125.54	
BUSD	+0.93%	51.03	51.44	50.84	
GUSD	-0.81%	11.11	11.19	11.06	

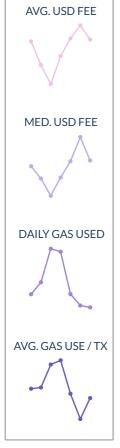
FEE MARKET

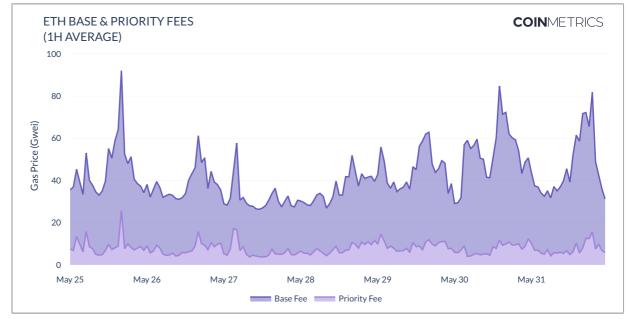












NETWORK DATA FUNDAMENTALS



ACTIVE ADDRESSES

Count of unique addresses that were active in the network

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	+0.22%	917,930	963,216	863,880
ETH	+6.01%	465,285	495,826	425,748
XRP	+13.87%	153,281	525,772	27,022
ADA	+44.51%	66,160	81,929	50,015
LTC	-51.00%	458,893	706,858	294,616
LINK	+67.12%	1,648	2,480	1,218
CRO	+10.66%	244	281	217
UNI	+1,218.19%	2,743	9,926	653
ВСН	+144.46%	44,554	94,551	21,623
FTT	+11.83%	79	104	60

FREE FLOAT SUPPLY

Sum of native units readily available to trade in open markets

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	+0.01%	13,767,096	13,767,747	13,766,145
ETH	+0.03%	111,701,451	111,714,665	111,683,274
XRP	-0.01%	45,607,488,671	45,608,687,530	45,606,085,103
ADA	+0.27%	30,187,503,445	30,244,233,847	30,160,524,462
LTC	-0.32%	62,857,933	62,921,707	62,708,317
LINK	-0.00%	506,306,763	506,310,493	506,294,627
CRO	-1.92%	11,626,671,510	11,708,927,278	11,484,526,131
UNI	+0.01%	240,183,336	240,208,612	240,176,525
ВСН	+0.03%	13,125,689	13,128,414	13,124,090
FTT	+0.00%	317,267,550	317,267,550	317,267,550

COINMETRICS ACTIVE ADDRESSES, 7 DAY TREND BTC ETH XRP ADA LTC LINK CRO UNI BCH FTT

TRANSACTION COUNT

Count of transactions

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	-9.70%	492,823	548,854	421,021
ETH	+3.33%	1,063,581	1,190,789	968,996
XRP	+18.32%	1,277,673	1,639,479	1,027,413
ADA	+58.21%	88,197	110,224	64,706
LTC	-63.05%	308,411	532,209	174,221
LINK	+38.99%	1,686	2,260	1,243
CRO	-7.38%	276	314	242
UNI	+1,201.14%	2,920	10,292	738
ВСН	+89.26%	41,645	98,660	16,512
FTT	+32.71%	90	142	63

TRANSFER VALUE, ADJUSTED

USD value of the sum native units transferred removing noise

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	-6.98%	3,275,945,873	4,481,815,590	1,919,915,706
ETH	+59.99%	2,856,853,828	3,966,765,983	1,817,639,481
XRP	+13,133.03%	7,915,203,250	52,559,651,908	156,940,530
ADA	+160.15%	23,011,617,903	34,296,668,144	11,568,080,582
LTC	+47.68%	175,480,629	331,255,193	88,541,677
LINK	+6.98%	15,202,748	25,319,480	6,930,684
CRO	-91.40%	3,551,342	8,260,720	574,380
UNI	+73.02%	12,387,110	25,867,386	5,438,723
всн	+31.75%	24,507,982	58,977,866	10,628,925
FTT	+335.43%	726,737	2,191,670	302,692

ADDRESSES ≥ \$1

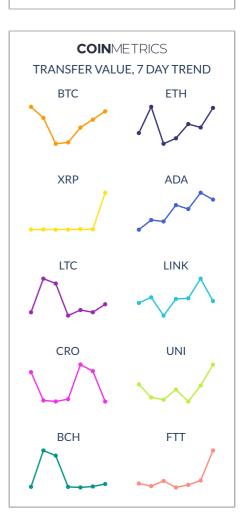
Count of addresses holding at least \$1 worth of native units

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	+0.71%	39,977,708	40,078,074	39,794,388
ETH	+1.17%	59,174,495	59,577,719	58,628,489
XRP	+0.14%	4,716,797	4,720,386	4,713,781
ADA	+0.62%	3,606,588	3,616,994	3,590,612
LTC	+1.80%	2,330,839	2,351,102	2,301,769
LINK	-0.02%	508,762	509,172	508,303
CRO	+0.02%	150,714	150,870	150,640
UNI	-4.28%	292,130	295,335	281,206
всн	+0.42%	3,976,925	3,998,046	3,956,712
FTT	-1.72%	20,308	20,421	20,064

ADDRESSES ≥ \$1M

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

ASSET	7D CHANGE	7D AVERAGE	7D MAX	7D MIN
втс	+0.87%	71,726	72,479	71,082
ETH	+2.37%	10,751	10,943	10,527
XRP	+14.04%	1,103	1,194	1,040
ADA	+4.77%	997	1,019	964
LTC	+2.26%	497	508	486
LINK	+0.60%	339	346	333
CRO	+0.00%	51	52	51
UNI	+3.97%	283	288	277
ВСН	-0.93%	214	217	213
FTT	-14.29%	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 $^{\text{TM}}$, 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. <u>More info</u> on datonomy.

SECTOR INDEXES

The Total Market Series is a suite of indexes measuring segments of the digital assets ecosystem as defined by datonomy $^{\text{TM}}$, 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. <u>More information</u> 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 5/28/2023 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 5/28/2023 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. Moreinformation 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 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 <u>futures basis metrics</u> 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 <u>Data Encyclopedia</u>.

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.

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 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.

© 2023 Coin Metrics Inc. All rights reserved. Redistribution is not permitted without consent. This newsletter does not constitute investment advice and is for informational purposes only and you should not make an investment decision on the basis of this information. The newsletter is provided "as is' and Coin Metrics will not be liable for any loss or damage resulting from information obtained from the newsletter.