dxFeed Crypto Ortho 500 Index Factsheet

dxFeed Index Management Team <im@dxfeed.com>

July 2, 2025

Description

dxFeed Crypto Ortho 500™ (COSM™) index computes the market price of a portfolio of cryptocurrencies that aims at having a weak correlation with a broad stock market index ("BMI"). In particular a numerical optimization procedure is utilized to find a suitable set of index parameters. Care is taken to avoid bias (e.g., outlier removal is performed) and ensure the index's statistical properties do not change quickly after the end of the parameter estimation period.

The resulting instrument can be considered an investment alternative to the broad market, and may be used in portfolio diversification scenarios.

Methodology

Please refer to the "*dxFeed Crypto Ortho 500 Index*" methodology for a detailed description.

Parameters & Components

Table 1 shows the index's current composition. Only "sensible" components are included in the index (e.g., stablecoins and wrapped tokens are excluded). Moreover, an ADTV filter and a volatility filter are applied to select relatively predictable and stable components so that their statistical properties and the properties of the resulting index remain the same after the end of the parameter estimation period.

Component	Symbol	Weight
ATOM	ATOM/USDT	0.3
FDUSD	FDUSD/USDT	0.3
TRX	TRX/USDT	0.3
DOT	DOT/USDT	0.0742
BCH	BCH/USDT	0.0258

Table 1: Current index composition

As depicted in figure 1, the index composition changes over the rebalancings, although some components are shared among effective configurations, albeit with different relative weights. The XRP component is present in four index configurations, suggesting it helps decorrelate the index against the benchmark.

The maximum component weight is capped at an appropriate value—see table 2. This serves as a regularization procedure to ensure the index's statistical properties of the index do not degrade rapidly.

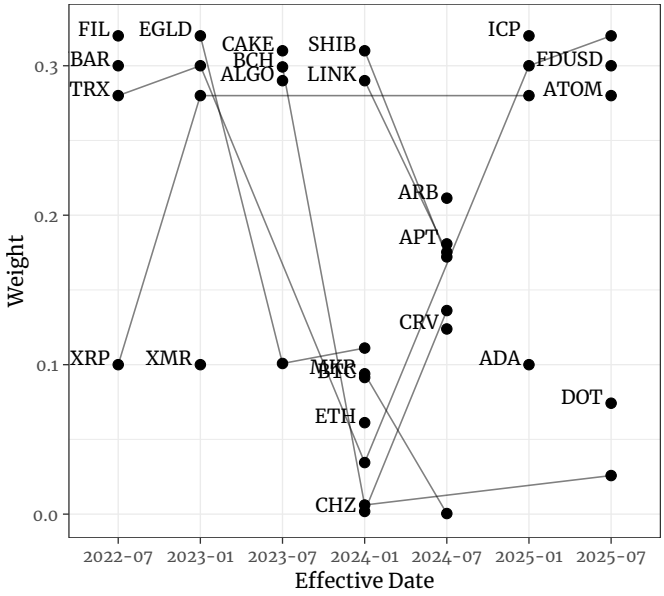

Figure 1: Index composition history. Components sharing the same weight on the same effective date have some jitter applied to improve plot readability. Solid lines indicate components inherited from previous configurations.

Figure 2 illustrates the outlier removal process. This process is necessary; otherwise, individual return outliers may significantly affect the corresponding correlation value. We use a simple Tukey-style outlier detection, as it is sufficient in most cases.

Table 2 contains index construction details. See the methodology for details.

Benchmark	Broad Market Index
Correlation optimization type	Minimization
Initial index value	3732.44
Start date	2021-01-04
Last rebalancing date	2025-07-02
Rebalancing frequency	Each 6 months
Parameter estimation period T	12 months
No. ADTV filter components N_{ADTV}	100
No. volatility filter components N_σ	30
Weight cap $w^{(\max)}$	0.3
Observation weighting degree m	0
No. components to carry forward k	4
IQR margin α	3

Table 2: Index construction details

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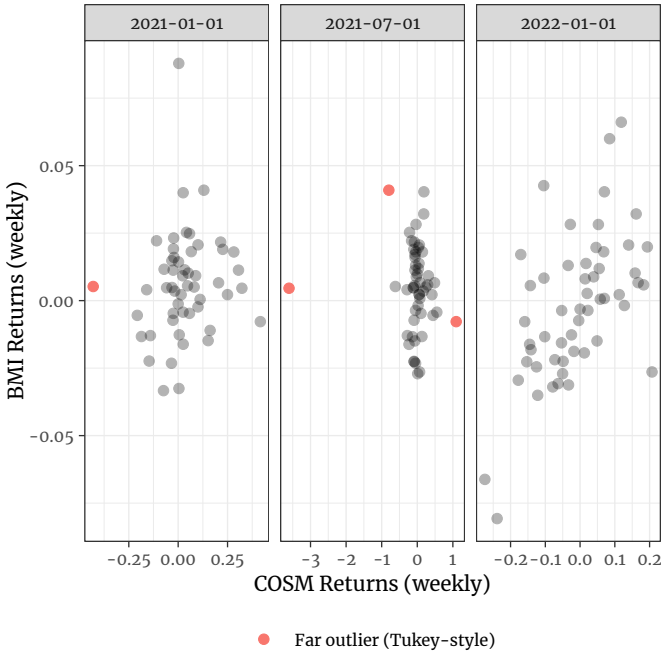

Figure 2: Illustration of outlier removal

Performance

Figure 3 is a time series chart of COSM calculated using components' daily close prices, with several intermediate rebalancings. Although the index is deliberately constructed to minimize the correlation with the benchmark, it can be seen to visually resemble the BTC/USDT plot, which strongly suggests all cryptocurrencies are correlated as an asset class. Moreover, even though the methodology carefully selects possibly "predictable" and moderately volatile tokens, one component did strongly affect the index at the beginning of the period. This is due to the volatile nature of the cryptocurrenies, and no method can be devised to reliably predict such events.

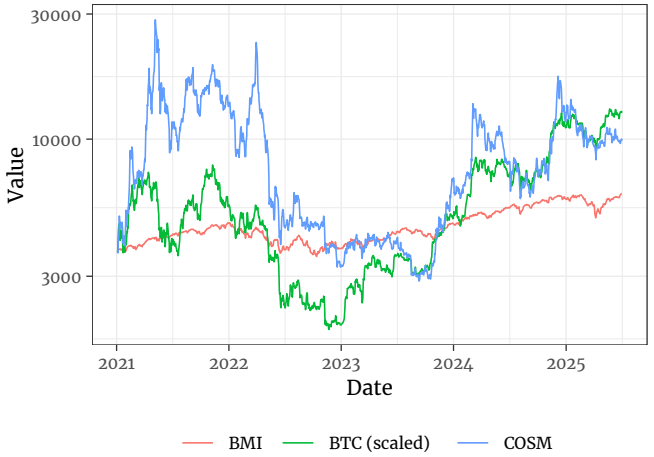

Figure 3: COSM performance compared to BTC/USDT (scaled to start at the same value as the index) and the benchmark (notice the log axis)

Table 3 contains correlation figures of COSM vs. the reference asset between rebalancing dates. For comparison, the correlation of BTC/USDT vs. the reference asset is presented, too. The suggested instrument gives a lower correlation than exclusively holding Bitcoin for up to about 20 percentage points. Whether this difference is significant is left to the investor's discretion.

EffectiveDate	BTC vs. BMI	COSM vs. BMI
2022-07-04	0.22	-0.02
2023-01-02	0.35	0.31
2023-07-03	0.07	0.39
2024-01-04	0.03	0
2024-07-02	0.56	0.59
2025-01-03	0.77	0.52

Table 3: Correlation of COSM & BTC vs. the reference asset across several periods

Figure 4 demonstrates the continued index configurations' optimality. In other words, at each effective date, the set of index parameters is optimal, i.e., has the lowest possible correlation, as guaranteed by the optimization procedure. With time, the parameters "degrade", as can be seen by the increasing correlation, and especially by the shrinking difference with the correlation of BTC vs. the benchmark. At each next rebalancing date a new set of parameters is obtained, restoring the property of optimality.

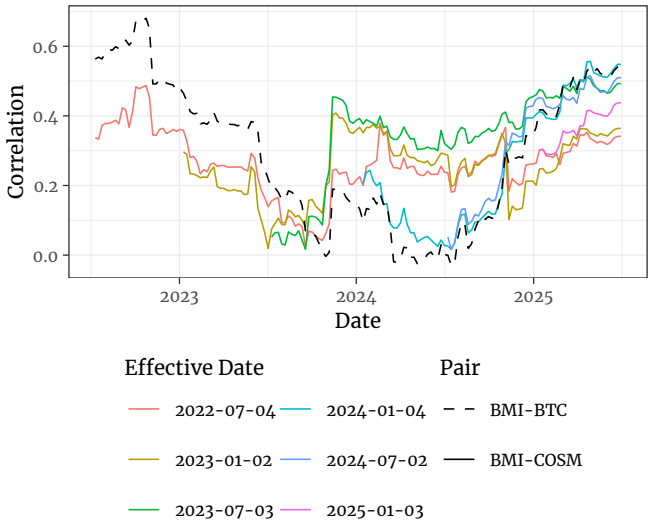

Figure 4: Rolling correlation of COSM vs. Broad Market Index. The window size is equal to the length of the parameter estimation period.

Dissemination Details

The index is calculated and disseminated at a fixed frequency; see table 4 for details.

Full Index Name	dxFeed Crypto Ortho 500 Index
Ticker Symbol	COSM:DXI
Calculation Period	1 minute
Schedule	Weekdays, 09:30–00:00 ET

Table 4: Dissemination details

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