COINMETRICS INDEXES

MARKET CONSULTATION

CMBI SINGLE-ASSET UPDATE

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Introduction

Coin Metrics is committed to ensuring that the CMBI Single Asset Index Series continues to remain representative of the market it is intended to track and meets the needs of investors. During our annual methodology review the Oversight Committee voted to replace the "CMBI Market Selection Framework" in section 3.1 of the CMBI Single-Asset Methodology with the Guidelines for Candidate Markets.

The Guidelines for Candidate Markets are to streamline and provide additional transparency to our market selection process by aligning with the Coin Metrics Exchange Framework.

In accordance with our CMBI Policy, Coin Metrics is consulting the market regarding these changes to the market selection process.

Responding to the consultation:

CMBI stakeholders are invited to respond by 18 Oct 2024. The responses will be reviewed by the Coin Metrics Oversight Committee and any changes will be communicated by via an announcement, which will be available on the coinmetrics.io public website

Please submit your response to the consultation to "cmbi-support@coinmetrics.io".

All responses will be treated as confidential.

If you have any questions about this consultation, please contact "cmbi-support@coinmetrics.io".

CMBI Single-Asset Index Background

The CMBI Single-Asset Index is designed to provide a comprehensive, transparent, and robust measurement of individual digital asset performance.

Proposed Changes Overview

The "CMBI Market Selection Framework" in section 3.1 of the CMBI Single-Asset Methodology will be replaced with the Guidelines for Candidate Markets which is in the Appendix.

Reasons for Change

The Guidelines for Candidate Markets are to streamline and provide additional transparency to our market selection process by aligning with the Coin Metrics Exchange Framework.

Appendix: Guidelines for Candidate Markets

1 Introduction

Coin Metrics evaluates markets traded on digital asset exchanges as potential input data sources for the CMBI Benchmarks. In this document, a *market* refers to a specific traded asset pair on a specific exchange. Only spot markets are considered. It produces a unique set of candidate selected markets for each index in the coverage universe.

Coin Metrics formally defines a cryptoasset as any digital asset that exhibit the following characteristics:

- 1. The use of a distributed ledger to allow remote peer-to-peer transfer of native units of the cryptoasset
- 2. The state of the distributed ledger is maintained by distributed consensus and does not require a central authority or trusted intermediary to function
- 3. Ownership of native units of the cryptoasset can be proven by cryptography

Provided these requirements are met, the cryptoasset can be issued on any underlying blockchain architecture and use any distributed consensus mechanism.

Markets that are approved are added to a list of constituent markets (the "Constituent Markets"). A separate list of Constituent Markets is maintained for each of the indexes in the coverage universe.

A candidate market can be nominated for inclusion and an existing constituent market can be nominated for exclusion by any member of the public. Public nominations for inclusion or exclusion of a market should be submitted in writing to cmbi-support@coinmetrics.io.



2 Other Documents

The CMBI Benchmarks are collectively governed by policies described in <u>CMBI Index</u> <u>Policies</u>, which outline the administration, oversight, conflicts of interest, significant changes and terminations, recalculations, internal controls, complaints, record retention, and compliance policies.

The CMBI Benchmarks are supervised by the <u>CMBI Governance Committee Charter</u>, which defines the roles and responsibilities of the Oversight Committee and the Index Committee.

3 Eligibility Criteria

3.1 Trusted Exchange Framework

Active exchanges are assessed and scored via the <u>Trusted Exchange Framework</u>. An exchange is eligible for inclusion if it satisfies all the following criteria:

- 1. Grade and Regulatory Compliance scores of at least B-
- 2. Data Quality score of at least **B**
 - a. A Data Quality score of B or above qualifies an exchange to be included in Coin Metrics' "trusted volume" universe.
- 3. Exchanges with an API Quality score of **D** are ineligible for consideration

3.2 Market Eligibility

3.2.1 Base Asset

The base asset for eligible markets is restricted to the underlying asset of the benchmark. Markets whose base asset differs from the underlying asset are not considered.

3.2.2 Quote Asset

For BTC and ETH, eligible quote assets are limited to U.S. Dollar (USD). No other quote currencies are considered. For all other cryptoassets (excluding BTC and ETH), markets must be quoted in U.S. Dollars (USD), USD Coin (USDC), or Tether (USDT).



The initial universe of eligible markets comprises the spot markets on eligible (trusted) exchanges having base and quote assets that satisfy (3.2.1) and (3.2.2), respectively.

3.3 Liquidity Assessment

The observation window for the Liquidity Assessment is the previous 180 days. The data inputs for the assessment are sourced from Coin Metrics' Market Data Feed.

Each market must further satisfy tests examining the following liquidity characteristics.

3.3.1 Slippage

For each eligible market, we take the average of its bid and ask slippage, then take the natural log. Finally we take the median to aggregate this score for each eligible market.

```
avgSlip_i = 0.5 * slippage_{ask} + 0.5 * slippage_{bid}

slippage_i = median(log(avgSlip_i))
```

3.3.2 Bid-Ask Spread

For each eligible market, we take the cubic-root of *liquidity_bid_ask_spread_percent_1d*. We take the median to aggregate this score for each eligible market.

$$spread_i = median(liquidity_bid_ask_spread_percent_1d_i^{1/3})$$

3.3.3 Volume

Daily trading volume (in native units) is totaled over the observation window. The volume score is determined by the natural log of a market's total volume.

```
volume_i = log(sum(volume))
```



3.3.4 Trade Size

Trade size is determined by daily volume (in native units) divided by the daily number of trades. Higher trade sizes can indicate institutional volume on an exchange. Size is scored as the median of trade size.

$$size_i = median(volume / \# Trades)$$

Liquidity scores are standardized by computing their z-score. A final grading metric is calculated as a composite function of the standardized variables in Section 3.3. For BTC and ETH, eligible USD-quoted markets whose median volume exceeds the 180-day median across all USD markets are selected.

Markets quoted in USD are preferred. If an underlying asset has three or fewer USD-quoted markets with sufficient liquidity, then its whitelisted markets are supplemented with stablecoin pairs until there are five whitelisted markets.

4 Review of Constituents

Proposed changes to constituent markets must be reviewed by the Index Committee and the Oversight Committee at least quarterly. The Oversight Committee has final approval over changes to constituent markets.