CoinDesk Market Index (CMI) Methodology

October 2022
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Introduction

Index Objective

The CoinDesk Market Index ("CMI" or the "Index") and its subindices (collectively, "Indices") are a family of broad-based digital asset indices designed to measure the market capitalization weighted performance of the digital asset market. The family includes Indices that reflect sectors defined in CoinDesk’s Digital Asset Classification Standard ("DACS"). Constituents must have readily available prices and trade on eligible exchanges as further detailed in Eligibility Criteria below.

Additional details

CMI is designed to capture all digital assets that meet the Eligibility Criteria including stablecoins and meme coins. It provides a broad representation of the performance of the digital asset market. Additional subindices are available that measure the performance of digital asset sectors and other market segments. CMI may include digital assets that are relatively illiquid or otherwise difficult to access, own, trade or custody. Digital assets that meet all eligibility criteria will be included regardless of their designation as a security by a government agency.

The CMI family is derived from the Digital Asset Classification Standard (DACS). Constituents must be included in DACS to be eligible for the Index. For more information on DACS, please refer to the DACS Glossary and DACS Methodology.

This methodology was created by CDI to achieve the above Index Objective. There may be circumstances or market events which require CDI, in its sole discretion, to deviate from certain rules to ensure each Index continues to meet its objective. This document should be read in conjunction with the CoinDesk Digital Asset Indices Policy Methodology.

Table 1: List of Indices

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Ticker</th>
<th>Launch Date</th>
<th>Base Date</th>
<th>Base Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoinDesk Market Index</td>
<td>CMI</td>
<td>9/9/2022</td>
<td>8/29/2022</td>
<td>1000.00</td>
</tr>
<tr>
<td>CoinDesk Market Ex Stablecoin Index</td>
<td>CMIX</td>
<td>9/9/2022</td>
<td>8/29/2022</td>
<td>1000.00</td>
</tr>
<tr>
<td>CoinDesk Computing Index</td>
<td>CPU</td>
<td>9/9/2022</td>
<td>8/29/2022</td>
<td>1000.00</td>
</tr>
<tr>
<td>CoinDesk Culture &amp; Entertainment Index</td>
<td>CNE</td>
<td>9/9/2022</td>
<td>8/29/2022</td>
<td>1000.00</td>
</tr>
<tr>
<td>CoinDesk Currency Index</td>
<td>CCY</td>
<td>9/9/2022</td>
<td>8/29/2022</td>
<td>1000.00</td>
</tr>
<tr>
<td>CoinDesk Currency Ex Stablecoin Index</td>
<td>CCX</td>
<td>9/9/2022</td>
<td>8/29/2022</td>
<td>1000.00</td>
</tr>
<tr>
<td>CoinDesk DeFi Index</td>
<td>DCF</td>
<td>9/9/2022</td>
<td>8/29/2022</td>
<td>1000.00</td>
</tr>
<tr>
<td>CoinDesk Digitization Index</td>
<td>DTZ</td>
<td>9/9/2022</td>
<td>8/29/2022</td>
<td>1000.00</td>
</tr>
<tr>
<td>CoinDesk Smart Contract Platform Index</td>
<td>SMT</td>
<td>9/9/2022</td>
<td>8/29/2022</td>
<td>1000.00</td>
</tr>
</tbody>
</table>
Eligibility Criteria

Universe eligibility

To be included in the Index Universe, a digital asset must meet the following criteria as of the Reconstitution Reference Date:

1. The digital asset must be included in the latest published DACS.

2. The digital asset must have been listed and trading on an Eligible Exchange for a minimum of 30 days leading up to the Reconstitution Reference Date. For details on Eligible Exchanges, refer to the CoinDesk Digital Asset Indices Policy Methodology.

3. The digital asset must be listed on at least two Eligible Exchanges as of the Reconstitution Reference Date.

4. A CoinDesk reference rate (“Reference Rate”) for the digital asset must be available, per the CoinDesk Reference Rate Methodology.

CMI subindices are determined based on DACS screens from the constituents of CMI as defined in Table 2.

Table 2: Subindex Eligibility Requirements

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Index Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoinDesk Market ex Stablecoin Index</td>
<td>Excludes digital assets classified in the Stablecoin Industry.</td>
</tr>
<tr>
<td>CoinDesk Computing Index</td>
<td>Digital assets classified in the Computing Sector.</td>
</tr>
<tr>
<td>CoinDesk Culture &amp; Entertainment Index</td>
<td>Digital assets classified in the Culture &amp; Entertainment Sector.</td>
</tr>
<tr>
<td>CoinDesk Currency Index</td>
<td>Digital assets classified in the Currency Sector.</td>
</tr>
<tr>
<td>CoinDesk Currency ex Stablecoin Index</td>
<td>Digital assets classified in the Currency Sector excluding assets in the Stablecoin Industry.</td>
</tr>
<tr>
<td>CoinDesk DeFi Index</td>
<td>Digital assets classified in the DeFi Sector.</td>
</tr>
<tr>
<td>CoinDesk Digitization Index</td>
<td>Digital assets classified in the Digitization Sector.</td>
</tr>
<tr>
<td>CoinDesk Smart Contract Platform Index</td>
<td>Digital assets classified in the Smart Contract Platform Sector.</td>
</tr>
</tbody>
</table>

Index Construction
Constituent selection

All digital assets that pass the Eligibility Criteria are selected for index inclusion.

Constituent weighting

Constituents are weighted based on market capitalization.

Circulating supply

At each reconstitution, the circulating supply for each constituent is determined based on the latest circulating supply on the Weighting Reference Date (see Index Maintenance). The circulating supply is not updated between reconstitutions.

Index calculation

The indices are calculated in real-time using Reference Rates for each underlying constituent as described below.

Constituent pricing

Real-time Reference Rates for digital asset constituents are calculated approximately every 5 seconds by CDI using a volume weighted average price (VWAP). Please refer to the CoinDesk Reference Rate Pricing Methodology for more details.

Calculation formula

\[
Index_t = Index_{PR} \times (1 + \sum_{i=1}^{N} \left( W_{i,PR} \times \frac{Constituent\ Price_{i,t}}{Constituent\ Price_{i,PR}} - 1 \right))
\]

where:

- \( Index_{Value_t} \) = Index Value at time \( t \)
- \( Index_{Value_{RB}} \) = Index Value as of prior reconstitution
- \( W_{i,PR} \) = Weight of constituent \( i \) as of prior reconstitution
- \( N \) = number of constituents
- \( Constituent\ Price_{i,t} \) = Reference Rate for constituent \( i \) at time \( t \)
- \( Constituent\ Price_{i,PR} \) = Reference Rate for constituent \( i \) as of prior reconstitution

Index Maintenance

Index reconstitution
Each Index is reviewed each month based on the rules described above. Any Index changes resulting from the monthly review are announced one week prior to the effective date and implemented on the second business day of the following month.

Table 4: Reconstitution Timing

<table>
<thead>
<tr>
<th>Activity Description</th>
<th>Timing</th>
<th>Example Reconstitution Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconstitution Reference Date</td>
<td>Announcement Date minus 7 business days</td>
<td>10/17/2022</td>
</tr>
<tr>
<td>Announcement Date</td>
<td>Effective Date minus 7 calendar days (following business day if this is a holiday)</td>
<td>10/25/2022</td>
</tr>
<tr>
<td>Lockdown Circulating Supply (Weighting Reference Date)</td>
<td>Effective Date minus 7 calendar days (following business day if this is a holiday)</td>
<td>10/25/2022</td>
</tr>
<tr>
<td>Effective Date</td>
<td>4PM on the 2nd business day of the month</td>
<td>11/02/2022</td>
</tr>
</tbody>
</table>

In addition to the quarterly process, constituents are monitored for potential anomalies and trading disruptions. Out-of-review monitoring, which would require an Index modification, only applies in extraordinary circumstances. Incident types that would require one or more Index modifications are outlined in the CoinDesk Digital Asset Indices Policy Methodology.

Deletions

If a constituent is removed from an Index outside of the scheduled reconstitution process, its weight will be set to zero on the effective date of removal and it will no longer contribute to Index returns. The impacted constituent will be considered for inclusion at future reconstitutions, if it meets the Eligibility and Selection Criteria.

Additions

There will be no additions to the Index between reconstitutions.

DACS reclassifications

In the event a constituent’s DACS classification is modified between reconstitutions, no changes will be made to its Index membership until the next reconstitution.

Data Distribution
Real-time Index values are calculated 24x7 at 5 second intervals and are available publicly at https://coindesk.com/indices/ and are also available to subscribers via REST, WebSocket APIs, and scheduled email updates.

**Index Governance**

The CoinDesk Index Committee provides ongoing oversight of the Index and its Methodology. For more details on the Index Committee, please refer to the Index Governance section of the CoinDesk Digital Asset Indices Policy Methodology.
Appendix 1: Data sources

This section describes data sources used to maintain, reconstitute, and calculate the Indices. If data is not available for any reason from the sources described in this appendix, other data sources may be used.

Reconstitution data

Market capitalization and circulating supply data are provided by CoinMarketCap.com. Notional volume is sourced from Eligible Exchanges.
Appendix 2: Methodology Changes

The table below provides a summary of methodology changes, if any, to this Index Methodology.

<table>
<thead>
<tr>
<th>Effective Date</th>
<th>Prior Treatment</th>
<th>Updated Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/02/2022</td>
<td>Weighting reference date used to determine circulating supply is two business days prior to the reconstitution effective date.</td>
<td>Weighing reference date used to determine circulating supply is seven calendar days prior to the reconstitution effective date.</td>
</tr>
</tbody>
</table>
Appendix 3: Document Revision History

<table>
<thead>
<tr>
<th>Description</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Version</td>
<td>Sept 23, 2022</td>
</tr>
<tr>
<td>Minor edits</td>
<td>Oct 9, 2022</td>
</tr>
<tr>
<td>Update to reconstitution weighting date</td>
<td>Oct 25, 2022</td>
</tr>
</tbody>
</table>
Disclaimer

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