



CoinDesk Large Cap Select Index Methodology

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Introduction

Index Objective

The CoinDesk Large Cap Select Index is designed to measure the market-capitalization weighted performance of some of the largest and most liquid digital assets classified in DACS that meet certain trading and custody requirements.

Additional Details

The CoinDesk Large Cap Select Index series (the “Index”) is derived from the Digital Asset Classification Standard (DACS). Constituents of the index must be included in DACS to be eligible for the Index. For more information on DACS, please refer to the DACS Glossary.

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

Table 1: List of Indices

Index Name	Index Ticker	Launch Date	Base Date	Base Value
CoinDesk Large Cap Select Index	DLCS	06/16/2022	04/04/2022	1000.00

Eligibility criteria

Universe Eligibility

To be included in an 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 most recently published DACS report.
2. Custodian services for the digital asset must be available from Coinbase Custody, a division of Coinbase Global Inc. and the digital asset must be accessible by U.S. investors.
3. The digital asset must not be classified in the DACS Stablecoin Sector or categorized as a meme coin as determined by CDI.
4. The digital asset must have been listed 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.

Index Construction

Constituent Selection

The constituent selection process targets the largest and most liquid digital assets from the Selection Universe subject to a final constituent count between 5 and 10, and buffer rules designed to reduce unnecessary turnover.

All digital assets that pass the *Eligibility Criteria* are ranked by market capitalization, as of the Reconstitution Reference Date, in descending order. The 20 highest ranked digital assets that meet the Eligibility Criteria form the Selection Universe.

Constituents will be selected from the Selection Universe as follows:

1. For each digital asset in the Selection Universe, calculate the Median Daily Value Traded (MDVT) across eligible exchanges over the previous 30-day calendar period leading up to, and including, the Reconstitution Reference Date.
2. For each digital asset in the Selection Universe, determine the closing market capitalization as of the Reconstitution Reference Date.
 - a. Based on the results from Step 1 and Step 2, the market cap and liquidity requirements are determined as follows:
Non-Constituent Liquidity Requirement = 1.20 times the median MDVT of the Selection Universe
 - b. Non-Constituent Market Cap Requirement = 1.20 times the median closing market cap of the Selection Universe.
 - c. Constituent Liquidity Requirement = median MDVT of the Selection Universe
 - d. Constituent Market Cap Requirement = median closing market cap of the Selection Universe
3. Following the determination of the market cap and liquidity requirements, all digital assets that do not meet all the following criteria as of the reconstitution reference date will be considered ineligible and, therefore, removed from the Selection Universe:
 - a. Must be a constituent of the CoinDesk Market Index (“CMI”). For more information on the CMI, please refer to the [CoinDesk Market Index Methodology](#).
 - b. Must be supported by a CoinDesk Reference Rate with 3 contributing exchanges.
 - c. Must be included in the Selection Universe as determined during the prior reconstitution.

4. All digital assets in the Selection Universe following Step 4 that are not current constituents will be evaluated against the Non-Constituent Liquidity and Non-Constituent Market Cap Requirements. All current constituents in the Selection Universe will be evaluated against the Constituent Liquidity and Constituent Market Cap Requirements. Digital assets that meet or exceed these requirements will be selected as index constituents (see Table 3). Based on the following results:
 - a. If fewer than 6 digital assets are selected, the market cap and liquidity requirements for non-constituents will be relaxed to match the requirements for constituents (Note: the digital asset must be included in the Selection Universe to be selected).
 - b. If more than 10 digital assets are selected, the digital asset(s) with the smallest market cap will be removed until 10 digital assets remain.
5. If Step 5 results in at least 5 digital assets selected as constituents, the selection process is complete. Otherwise, the market cap and liquidity requirements will be relaxed further starting with current constituents until a minimum of 5 constituents are selected.

The Index Committee will review the constituent selection results if the market cap and liquidity criteria need to be relaxed.

Table 3: Selection Requirement:

Requirement for Inclusion	Non-Constituents	Constituents
Included in Selection Universe	Yes	Yes
Minimum Markets Test	3 eligible exchanges	3 eligible exchanges
Closing Market Cap	\geq median Market Cap of the Selection Universe * 1.20	\geq median Market Cap of the Selection Universe
30-day Median Daily Value Traded (MDVT)	\geq median 30-day MDVT of the Selection Universe * 1.20	\geq median 30-day MDVT of the Selection Universe

Constituent Weighting

Constituents are market capitalization weighted subject to a minimum weight requirement of one percent and a minimum count of five constituents. The following process is used to weight constituents at each reconstitution:

1. Determine the preliminary weights of each digital asset selected based on its market capitalization as a percentage of the total market capitalization of all digital assets selected.
2. Rank all digital assets from Step 1 in descending order based on the preliminary weight.

3. To minimize unnecessary turnover, the Minimum Weight Requirement for all current constituents (non-constituents) is 0.80 (1.0) percent respectively. The preliminary weights from Step 2 will be reviewed against the Minimum Weight Requirement.
4. If the preliminary weight of any digital asset from Step 2 is below the applicable Minimum Weight Requirement determined in Step 3 and there are more than 5 digital asset constituents, the following iterative steps are performed:
 - a. Remove the lowest ranked digital asset and redistribute its weights proportionally to all remaining digital assets.
 - b. Repeat Step 4 if the weight of any remaining digital asset is below the applicable Minimum Weight Requirement and there are more than 5 digital asset constituents.
5. The results determined in Step 4 will be the final constituents and weights.

Circulating Supply

At each reconstitution, the circulating supply for each constituent is determined based on the latest circulating supply on the Weighing 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

Reference Rates for constituent digital assets are calculated approximately every 5 seconds by CDI using a volume weighted average price (VWAP) across three contributing exchanges over the prior 60 minutes. These reference rates are referred to as Settlement Reference Rates in the CoinDesk [Reference Rate Methodology](#).

The number of contributing exchanges may drop below three between reconstitutions. In the event the number of contributing exchanges drops below three between reconstitutions, the Index Committee will review the eligible exchanges at the end of the month to determine the appropriate course of action.

Calculation Formula

$$Index_t = Index_{PR} * (1 + \sum_{i=1}^N W_{i,PR} * (\frac{Constituent Price_{i,t}}{Constituent Price_{i,PR}} - 1))$$

where:

Index_t = Index Value at time *t*

$Index_{PR}$ = Index Value as of prior reconstitution effective date
 $W_{i,PR}$ = Weight of constituent i as of prior reconstitution effective date
 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 effective date¹

Index Maintenance

Index Reconstitution

Each index is reviewed on a quarterly basis based on the rules described above. Any index changes resulting from the quarterly review are announced two weeks prior to the effective date and implemented on the second business day of January, April, July, and October. Please see Table 4 for the reconstitution timing.

Table 4: Reconstitution Timing

Activity Description	Timing	Example Reconstitution Timing
Reconstitution Reference Date	Announcement Date minus 2 business days	12/19/2022
Announcement Date	Effective Date minus 14 calendar days (following business day if this is a holiday)	12/21/2022
Lock-down Circulating Supply (Weighting Reference Date)	Effective Date minus 7 calendar days (following business day if this is a holiday)	12/28/2022
Effective Date	4PM Eastern Time on the 2 nd business day of the start of each quarter	01/04/2023

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.

¹ Reference prices used to reconstitute the Indices are based on the last calculated value prior to 16:00 Eastern Time.

Deletions

If a constituent is removed from an index outside of the scheduled reconstitution process it will not be replaced. The weight of the constituent being removed will be redistributed proportionally to all remaining constituents as of the effective date of removal.

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 unless the constituent count drops below 5. If the constituent count drops below 5, the Index Committee will review the eligible universe and determine the appropriate action.

Data Distribution

Real-time index values are calculated 24x7 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.

Price data

Prices used to calculate VWAPs are sourced from Eligible Exchanges.

Volume data

Volume data used to calculate VWAPs are sourced from Eligible Exchanges.

Reconstitution Data

Market capitalization and circulating supply data are provided by CoinMarketCap.com and are taken at midnight UTC. Circulating supply and market capitalization data is subject to review by CDI and may be modified for appropriateness.

Daily notional volume is sourced from eligible exchanges. Daily notional generally reflects midnight UTC but is determined by the convention that the exchange uses, which may differ. In the event an exchange does not explicitly provide daily notional, CDI will estimate daily notional for a digital asset using the following formula:

Daily Notional Volume = Daily trading volume * (open price + close price)/2

Other data

The availability of requisite custodian services for digital assets is obtained directly from the custody provider(s).

Appendix 2: Methodology Changes

The table below is a summary of modifications to this Methodology.

Effective Date	Prior Treatment	Updated Treatment	Material Change
5/20/2024	Digital assets must be ranked within the top 200 of DACS to be eligible.	Digital assets must be included in DACS to be eligible.	No
12/21/2022	N/A	Digital asset must be included in CMI to be eligible for inclusion.	No
12/21/2022	Weighting Reference Date 2 business days prior to Effective Date	Weighting Reference Date 7 calendar days prior to Effective Date	No

Appendix 3: Document Revision History

Timing	Description
8/23/2024	Updated Constituent Pricing section to clarify that pricing uses the Settlement Reference Rates in the Reference Rate Methodology following the addition of Spot Reference Rates
5/9/2024	See Methodology Changes Appendix dated 5/20/2024. In addition, minor updates and clarifications as part of the Annual Methodology Review
6/20/2023	Annual Methodology Review resulting in minor edits and clarifications
12/21/2022	Updates to Index Selection and Eligibility sections Updates to Constituent Pricing section to refer to the CoinDesk Reference Rate methodology Updates to Data Sources appendix related to determination of notional volume
5/16/2022	Initial version

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