

DP Composite Index Methodology

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DP Composite Index (DPC) is a comprehensive crypto market index developed by DPRating. Most recent DPC value, index components and weights are available on dprating.com. This is the technical document for DPC.

Index Objective

Reflect market movements of tokens in all categories. DPC design principle is to assure large-cap constituents do not skew the overall index value while preventing the exclusion of small-cap categories.

Index Highlight

1. Token Classification: Tokens are divided into six categories. Top 5 by market cap of each category are selected as index constituents.
2. Dual Layer Weighting Approach: Tokens within each type are cap weighted. Weights among different categories are determined by the square root of the total market cap.
3. Bimonthly Update: Index is reconstituted and rebalanced on the third Wednesday of each odd-numbered month.
4. Buffering Rule: Token exclusion and inclusion are determined by market cap ranking with a 20% buffer.

Token Classification

All tokens except pegged cryptocurrencies are classified into the following 6 categories.

1. Currency and Payment: The tokens that are solely used for value transfer. This is also the default classification for all forked tokens. A forked token cannot be reclassified until true application scenarios other than payment are available.
2. Operating System: The projects aiming to become an underlying infrastructure for other applications.
3. Trading and Transaction: The projects facilitating virtual asset trading. As for pegged cryptocurrency with dual token design, the pegged token is not classified while the other one belongs to this category.
4. Real World Gateway: The projects facilitating registering asset/credit/identity in the real world on the blockchain.
5. Technical Solution: The projects improving blockchain usability, including cross-chain, side-chain, cloud storage, development tool, etc.
6. Others: Projects do not belong to the types above, including content distribution, social media, game, online store, app store, etc.

Index Reconstitution

DPC is reconstituted on the third Wednesday of each odd-numbered month. Reconstitution is based on the average market cap collected hourly from coinmarketcap.com from 2 am Monday to 2 am Friday UTC of the week before reconstitution date. Market cap mentioned in this document refers to the product of token price and circulating supply. Circulating supply is the total amount of tokens in existence minus locked quantity.

The following buffering rule is applied to token exclusion and inclusion.

When a non-constituent token's average market cap rank is higher than the 4th of its type, it will replace the bottom-ranked constituent token of the same type; When a constituent token's market cap rank is lower than the 6th of its category, it will be substituted by the top-ranked non-constituent token of the same category.

If abnormal price behavior is detected, certain tokens can be replaced immediately. Replacement in this situation is not subject to buffering rule.

Weighting Approach

DPC's weighting approach is a dual layer mechanism. Tokens within each type are cap weighted. Weights among different categories are determined by the square root of the total market cap. Category Market Cap is defined as the sum of average market caps of 5 constituent tokens within the category. Token weights are updated every odd-numbered month based on the average market cap mentioned in the previous section.

$$Token\ Weight = \frac{Token\ Avg\ Market\ Cap}{Category\ Market\ Cap} \times \frac{\sqrt{Category\ Market\ Cap}}{\sum \sqrt{Category\ Market\ Cap}}$$

Index Calculation

DPC has been released at 2 am 4/12/2018, UTC. The initial index value is 1000. DPC values before releasing time are calculated according to historical data. DPC is rebalanced on the third Wednesday of each odd-numbered month. The rebalancing time is regarded as the "Initial" time for the following period. New DPC value is calculated as follows.

$$Current\ DPC = Initial\ DPC \times \sum Token\ Weight \times \frac{Current\ Token\ Price}{Initial\ Token\ Price}$$