

17 February 2022

Benchmark Statement

Introduction

This benchmark statement is provided by CC Data Limited (**CC Data**), which is the benchmark administrator for the Crypto Coin Comparison Aggregated Index Family, which is a proprietary family of benchmarks for pricing digital assets (the **Index**), and is intended to meet the requirements in Article 27 of Regulation EU/2016/1011 (as well as the regulatory technical standards including Commission Delegated Regulation EU 2018/1643 (**RTS**)) as implemented in the domestic law of the United Kingdom pursuant to the European Union (Withdrawal) Act 2018 (as amended) as supplemented and amended by various UK statutory instruments including the Benchmark (Amendments and Transitional Provision) (EU Exit) Regulations 2019 (SI 2019/657) (the **BMR**) and should be read in conjunction with the policies and methodology documents available on the [CC Data website](#) or upon request.

This benchmark statement intends to define the economic reality measured by the Index and the circumstances in which such measurement may become unreliable. This statement highlights, where applicable, any elements of the calculation of the Index where CC Data may apply discretion or expert judgement. This statement also provides an overview of those internal and external factors which may require changes to the methodology of the Index and the potential impact on the value of the financial instruments, products or funds that reference the index.

CC Data is authorised and regulated by the United Kingdom Financial Conduct Authority as a benchmark administrator with firm reference number 938826 for the purposes of Article 34 of the BMR.

This Benchmark Statement was published on 17 February 2022 and was last updated on 17 February 2022.

General Information

The Index is a non-significant and non-critical benchmark for the purposes of the BMR. CC Data does not treat the Index as a regulated data benchmark, an interest rate benchmark or a commodity benchmark as those terms are defined in the BMR. CC Data does not currently assign an ISIN to the Index.

The Index does not utilise contributions of input data for determining the Index as contemplated in the BMR. The source of input data for the Index is transactional data pulled directly from publicly available APIs of the constituent exchanges.

All key terms are set out in Section 3 of the CCCAGG Index Methodology document (see Documents section below).

Description of the Market or Economic Reality Measured by the Index

The benchmark family measures the performance of cryptocurrency pairs in the currency of denomination of the respective benchmark (for example: CCCAGG BTC-USD) based on a 24-hour volume-weighted average calculation, time-penalty factor and outlier methodology, with the purpose of showing the best price estimation for investors to value their financial contracts, instruments and portfolio (at any time, including business holidays) where they reference the Index. A detailed list of available cryptocurrencies is available on request (see Contact section below).

The benchmark family aggregates transaction data of more than 250 exchanges, using a 24-hour volume-weighted average. The geographical boundaries of the market measured by the benchmarks are described in the CCCAGG Index Methodology document (click on the link in the “Documents” section below).

Methodology

The rationale for adopting the methodology is to create a benchmark, which measures the market or economic reality described above. The methodology used for determining the Index is reviewed at least every quarter by the Technical Committee at CC Data to ensure that it remains representative of the relevant market or economic reality that it is intended to measure.

The process for approving the Index follows the governance processes established by CC Data’s internal policies and procedures, which are designed to comply with the BMR.

The Index calculation methodology for digital assets is based on 24-hour volume-weighted average calculation, time-penalty factors and outlier methodologies solely based on transaction data from more than 250 exchanges. This is intended to ensure the Index gives greater weight to liquid market prices.

The Index is calculated for each cryptocurrency in each market it is trading in (for example, CCCAGG BTC-USD). Further details on how the Index is calculated can be found in Section 5.3 of the CCCAGG Index Methodology Document (click on the link in the “Documents” section below).

The Index methodology has been reviewed and approved in accordance with CC Data’s internal controls and procedures, which are designed to ensure compliance with the BMR. The internal controls and procedures are designed to ensure that the methodology remains robust and reliable, and mitigate factors that might result in a distortion or error.

The methodology is reviewed by CC Data and approved by the Oversight Function on at least an annual basis.

Procedure for changing the Methodology

CC Data has implemented a Benchmark Methodology Change and Cessation Policy, which governs the implementation of changes to the methodology of the Index.

A change may be triggered in the following circumstances:

- As the result of an annual or additional internal review of a Benchmark Methodology;

- On the recommendation of the CC Data Board of Directors or the Oversight Committee;
- On the recommendation of the Technical Committee or the Compliance department;
- Due to issues raised by stakeholders including subscribers and other users.

CC Data will conduct an analysis of the impact of the proposed change on the Index and will determine whether the proposed change: (a) is beneficial to the quality and representativeness of the Index with respect to the underlying market or reality that it represents; and (b) constitutes a material change to the Methodology with advice from the Oversight Committee.

If CC Data determines that the change is beneficial to the quality and representativeness of the Index but does not constitute a material change, it will amend and publish the new methodology. If CC Data determines that the change is material then it will enter into a public consultation of no less than thirty days. Users will be notified, at a minimum, of the key elements of the methodology that would be affected by the proposed material change via API newsletter and other direct client communication channels, and the proposed methodology amendments will be available for review at data.cryptocompare.com/research, where users will be able to submit feedback on any proposed change.

Following receipt of feedback, if any, at the conclusion of a consultation period for a proposed change that constitutes a material change, the Oversight Function will determine whether to proceed with the change. If the determination is not to proceed, CC Data will announce that determination.

If the determination is to proceed with the proposed change, CC Data will announce that determination and state an effective date for the confirmed change.

The notification period shall depend on the nature of the Benchmark and the confirmed change but shall typically be not less than one calendar month.

An amended Benchmark Methodology document will be issued following the announcement of a confirmed change with an updated version history.

Input Data Interruptions and Errors

Input data interruptions do occur from time to time due to the suspension of trading on the exchanges, the temporary closure of the exchanges or IT outages that adversely impact the quality of the exchanges API service. CC Data has specifically designed its systems and methodology to account for such interruptions.

The major processes that CC Data has in place to address these issues include:

- Time penalty factor: If the index calculation service stops receiving updated data, the methodology time penalty factor will reduce the weight of the exchange automatically;
- Historical calculation: Once the exchange service is back, the collection service will attempt to backfill trade data if it is available. The Index is recalculated with the late data and saved as a dynamic version; the static version of the index stays intact.

The methodology process also factors in the potential for errors and distortions (known as outliers) in input data. Further details can be found in Section 5.3.5 of the Methodology Document.

The Index is recalculated whenever errors or distortions occur that are deemed to be significant by the Oversight Committee. All such decisions are taken in accordance with CC Data's control environment and procedures.

Users will be notified of such changes through appropriate media channels.

Discretion and Expert Judgement

The Index is rules-based and its construction is designed to consistently produce values without the need to apply and/or exercise expert judgement or discretion.

However, CC Data may exercise expert judgement and discretion in limited circumstances, including where input data is or appears to be qualitatively inferior, different sources provide different data or a situation is not covered by the Index rules. The exercise of expert judgement and/or discretion will be subject to approval by the Technical Committee and will be conducted in a manner that complies with CC Data's control framework.

In case of material changes to input data, the relevant situation will be analysed in detail, described, presented, discussed and reviewed by the Oversight Function and discussed and reviewed with the Oversight Function.

Any decisions taken will be made in good faith and in a commercially reasonable manner, which weighs the different interests and needs of the users of the Index, the requirement to ensure integrity of the market and the interests of other parties.

As a matter of policy and in order to minimise the need to apply and/or exercise expert judgement, CC Data may consider updating the Index rules. Other possible mitigation measures may include changing input data sources or providers and/or conducting own data research, where possible and reasonable.

The policy sets out the circumstances in which expert judgement may be used and the circumstances in which users will be consulted or notified. The policy requires records to be retained and sets out the conditions that trigger a review.

Limitations of the Index

The Index works best for liquid markets where multiple exchanges provide data sources for the Index. If the number of exchanges is low or each individual exchange is illiquid, the volume-weighted average price will give an indicative value that might not sufficiently reflect the market.

The Index also relies on frequent trade updates. If no trading occurs on a market for more than 24 hours, the Index will become stale.

The potential limitations of the Index include circumstances where prices of constituents of the benchmarks are unavailable, either because there are insufficient exchange participants, outage problems or closures.

For the purposes of determining the benchmarks within the Index, the methodology specifies that the 24-hour volume is calculated as the sum of the volume over the last 23 hours and the cumulative volume of the current hour. In certain circumstances, these will default to the last traded price. This ensures that the benchmarks can continue to be determined and that the values portfolios that reference the benchmark can continue to be calculated.

Cessation or Changes to the Index

Factors, including external factors beyond the control of CC Data, may necessitate changes to, or the cessation of, the Index.

Circumstances that may trigger a change or cessation of the Index, may include, but are not limited to:

- A benchmark is no longer representative of the price of a crypto asset pair in a satisfactory way;
- There is not sufficient trading activity on a currency pair to reliably calculate the benchmark; and
- Substantiated concerns regarding data quality from benchmark input data.

Any proposed change or cessation will be submitted to the Oversight Committee and will be subject to CC Data's internal governance and oversight procedures.

CC Data will use best efforts to notify users of any proposed changes or the cessation of the Index. If a cessation is confirmed, CC Data will issue a notification of cessation and the expected cessation date to users via the API newsletter or direct user communication channels and on the CC Data's website.

ESG Disclosures

The benchmarks within the Index design do not take account of ESG factors and do not pursue any ESG objectives.

The benchmarks within the Index do not use any temperature scenario, do not align with the target on carbon emission reductions and do not attain the objectives of the Paris Agreement.

Please see Annex 1 of this benchmark statement for further details on our ESG disclosures.

Updates

CC Data shall update this Benchmark Statement in the event of any material changes to the information provided hereunder, including but not limited to any updates to the CCCAGG Index Methodology. This Benchmark Statement shall in any case be subject to review at least every two years.

Documents

The Methodology Document can be accessed via the following link:

<https://data.cryptocompare.com/reports/cryptocompare-aggregate-index-methodology-jan-2021>

Other documents relating to the calculation and oversight of the integrity of the Index may be provided to users upon request.

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Annex

ESG Disclosures

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE BENCHMARK STATEMENT

SECTION 1: CONSIDERATION OF ESG FACTORS

- Item 1.** Name of the benchmark administrator. CC Data Limited
- Item 2.** Type of benchmark or family of benchmarks. The Index as specified above and is “other” for the purposes of Annex II. For the purposes of Annex II, there are no environmental, social and governance (ESG) factors to be considered or pursued in respect of relevant underlying assets of the Index.
Choose the relevant underlying assets from the list provided in Annex II of the applicable legislation under the UK BMR.
- Item 3.** Name of the benchmark or family of benchmarks. The index as specified above.
- Item 4.** Are there in the portfolio of the benchmark administrator any (as defined in the UK BMR) UK Climate Transition Benchmarks, UK Paris-aligned Benchmarks or benchmarks that pursue ESG objectives or benchmarks that take into account ESG factors? No.
- Item 5.** Does the benchmark or family of benchmarks pursue ESG objectives? No.
- Item 6.** Where the response to Item 5 is positive, provide below the details (score) in relation to the ESG factors listed in Annex II for each family of benchmarks at an aggregated level. The ESG factors shall be disclosed at an aggregated weighted average value at the level of the family of benchmarks.
- a) List of combined ESG factors: The Index does not pursue ESG objectives.
- b) List of environmental factors: The Index does not pursue ESG objectives.
- c) List of social factors: The index does not pursue ESG objectives.
- d) List of governance factors: The index does not pursue ESG objectives.

Item 7. Where the response to Item 5 is positive, provide below the details (score) for each benchmark, in relation to the ESG factors listed in Annex II, depending on the relevant underlying asset concerned.

Alternatively, all of this information may be provided in the form of a hyperlink to a website of the benchmark administrator included in the benchmark statement. The information on the website shall be easily available and accessible. Benchmark administrators shall ensure that information published on their website remains available for five years.

The score of the ESG factors shall not be disclosed for each constituent of the benchmark, but shall be disclosed at an aggregated weighted average value of the benchmark.

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| a) List of combined ESG factors: | The Index does not pursue ESG objectives. |
| b) List of environmental factors: | The Index does not pursue ESG objectives. |
| c) List of social factors: | The index does not pursue ESG objectives. |
| d) List of governance factors: | The index does not pursue ESG objectives. |
| Hyperlink to the information on ESG factors for each benchmark: | Not Applicable. |

Item 8. Data and standards used

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| a) Description of data sources used to provide information on the ESG factors in the benchmark statement.
<i>Describe how the data used to provide information on the ESG factors in the benchmark statement are sourced and whether, and to what extent, data are estimated or reported.</i> | The Index does not use ESG factors. |
| b) Reference standards.
<i>List the supporting standards used for the reporting under item 6 and/or item 7.</i> | The UK BMR |

SECTION 2 – ADDITIONAL DISCLOSURE REQUIREMENTS FOR UK CLIMATE TRANSITION BENCHMARKS AND UK PARIS-ALIGNED BENCHMARKS

Item 9. Where a benchmark is labelled as a ‘UK Climate Transition Benchmark’ or ‘UK Paris-aligned Benchmark’, benchmark administrators shall also disclose the following information:

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| a) forward-looking year-on-year decarbonisation trajectory; | In the Index there are no UK Climate Transition Benchmarks or UK Paris-aligned Benchmarks. |
| b) degree to which the IPCC decarbonisation trajectory (1,5°C with no or limited overshoot) has been achieved on average per year since creation; | In the Index there are no UK Climate Transition Benchmarks or UK Paris-aligned Benchmarks. |
| c) overlap between those benchmarks and their investable universe, as defined in the relevant delegated legislation under UK BMR, using the active share at asset level. | In the Index there are no UK Climate Transition Benchmarks or UK Paris-aligned Benchmarks. |

SECTION 3 – DISCLOSURE OF THE ALIGNMENT WITH THE OBJECTIVES OF THE PARIS AGREEMENT

Item 10. By the date of application of the relevant delegated legislation under UK BMR, for significant equity and bond benchmarks, UK Climate Transition Benchmarks and UK Paris-aligned Benchmarks, benchmark administrators shall also disclose the following

- a) Does the benchmark align with the target of reducing carbon emissions or the attainment of the objectives of the Paris Agreement; No and not applicable.
 - b) the temperature scenario, in accordance with international standards, used for the alignment with the target of reducing GHG emissions or attaining of the objectives of the Paris Agreement; No and not applicable.
 - c) the name of the provider of the temperature scenario used for the alignment with the target of reducing GHG emissions or the attainment of the objectives of the Paris Agreement; No and not applicable.
 - d) the methodology used for the measurement of the alignment with the temperature scenario; No and not applicable.
 - e) the hyperlink to the website of the temperature scenario used. No and not applicable.
- Date on which information in this Annex has last been updated and reason for the update:** February 2022