



CUMBERLAND
A DRW COMPANY

MVIS
A VanEck Company

INDEX GUIDE

CUMBERLAND LIQUID PRIME CRYPTO ASSET INDEX

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1 INTRODUCTION

1 Introduction

In accordance with Art. 13 No. 1 (a) of Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 (the "Benchmark Regulation"), this document provides the rules for establishing, calculating and maintaining the Cumberland Liquid Prime Crypto Asset Index ("TOKEN").

1.1 Objective of Index

The Cumberland Liquid Prime Crypto Asset Index ("TOKEN") seeks to capture the return of the largest crypto assets in the market with a particular emphasis on assets that can be held by institutions. In addition, the index serves as a benchmark for the broader crypto asset class. While most traditional financial markets have indices formed based on specific indexing rules and methodologies, crypto assets are a nascent asset class without the same benefit. The Index aims to bring transparency and a rule-based approach to the index market and also serve as benchmark for active strategies. The Index includes the following three guiding principles:

1. Index formations are transparent and replicable with Index Committee decisions made with full documentation;
2. Index serves as a broader proxy for the overall crypto asset market and is responsive to the changing nature of the market; and
3. Index takes into account tradable/investable factors such as liquidity, exchange stability, custody limitations, KYC/AML framework, security vulnerabilities and other rules-based criteria.

1.2 About Cumberland DRW LLC

Cumberland DRW LLC is a global leader in crypto assets. Cumberland DRW LLC provides the access that financial institutions and high net worth individuals need to capitalize on opportunities in the crypto asset space, while working to ensure that the ecosystem continues to grow and evolve in a responsible, sustainable way. Founded in 2014, Cumberland is a proud part of DRW, a diversified principal trading firm with more than 25 years of experience across asset classes, instruments, and strategies, in markets around the world. Cumberland DRW LLC is dedicated to delivering professional onboarding and relationship management, timely and efficient settlements, and 24/7 access to a unique depth and breadth of crypto assets.

Cumberland DRW LLC (the "Index Owner") makes no warranties or representations as to the accuracy and/or completeness of the Index and does not guarantee the results obtained by persons using the Index in connection with trading funds or securities. The Index Owner makes no representations regarding the advisability of investing in any fund or security. The Index Owner via the Index Committee reserves the right to update the rules in this index guide at any time. The Index Owner also reserves the right to make, in exceptional cases or in temporary situations, exceptions to the rules in this index guide.

The Index is the property of Cumberland DRW LLC. The Index Owner has selected an index administrator (MV Index Solutions GmbH, "MVIS") to maintain the index.

The use of the index in connection with any financial products or for benchmarking purposes requires a license. Please contact Cumberland DRW LLC for more details.

1.3 About MV Index Solutions GmbH

MVIS® is a registered trademark of Van Eck Associates Corporation and therefore protected globally against unlawful usage. MVIS has selected an index calculation agent to calculate the index.

1 INTRODUCTION

1.4 Approval of Index Methodology

The Index Owner has established the Index and its individual methodology covered in this Index Guide. A detailed written "Procedure for Index Development" describes the steps and approvals required to develop, document and approve an Index and its methodology. The intention of the Procedure for Index Development is to ensure that the methodology of an Index meets the requirements of Art. 12 of the Benchmark Regulation and is approved and implemented according to a robust and reliable process. The methodology for the index covered in this Index Guide has been analysed by the Index Administrator's Index Operations department in order to ensure that it is robust and reliable, has clear rules on use of discretion, allows sustainable validation (based on reasonable back testing) and is traceable and verifiable. Furthermore, the size, liquidity and transparency of the underlying market for each methodology has been tested and particular circumstances for each relevant market have been taken into account.

Each index methodology and the related detailed analysis was presented by the Index Operations Department to the Independent Oversight Function for its approval. Based on the aforementioned approval process and its documentation each Index Methodology was presented to the Management Board (Geschäftsführer) of the Index Administrator for final approval.

1.5 Review of this Index Guide

According to Art. 13 No. 1 (b) of the Benchmark Regulation, the Index Administrator reviews this Index Guide including the index methodology, parameters and thresholds on an annual basis and immediately in case of special circumstances that require a review. The review takes place in meetings attended by the Independent Oversight Function and the Management Board of the Index Administrator. If changes to this Index Guide are considered necessary, the process described in Section 4.6 applies. Any changes will be communicated by Cumberland and MVIS with a 60-day lead time to enable customers to adjust their processes.

2 GENERAL DEFINITIONS

2 General Definitions

2.1 Index Dissemination and Identifiers

The index is calculated with the constituent prices converted to USD, on a daily basis between 00:00:00 and 24:00:00 (UTC). Dissemination is in USD. Real-time index values are calculated with the latest available CCCAGG prices each 15 seconds. The closing value is calculated at 24:00:00 UTC with fixed 24:00:00 UTC exchange rates.

The Cumberland Liquid Prime Crypto Asset Index has the following identifiers:

Index Type	ISIN	SEDOL	WKN	Bloomberg	Reuters
Price Return Index	TBD	TBD	TBD	TOKEN	.TOKEN

The index was launched on XX April 2019 with a base index value of 1000.00 as of 31 December 2016.

2.2 Review Schedule

The Index is rebalanced monthly (the “Monthly Rebalance Date”).

The reviews for the Index are based on the opening data (adjusted for reviewed circulating supply) on the fourth last business day in that month. If a security does not trade on a business day, then the last available price for this security will be used.

A “business day” means any day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments in Frankfurt.

Adjustments to constituents will be announced four business days prior to the first business day of the next month at 23:00:00 CET/CEST.

The Index is rebalanced at 24:00:00 UTC of the last business day in each month.

2.3 Pricing Source

For each component pricing is calculated using a custom eligible exchange subset of the CCCAGG Price Index by CryptoCompare (www.cryptocompare.com). CCCAGG is a weighted average of the latest available trading price at each exchange.

The list of approved exchanges is updated and managed on a monthly basis by the Index Committee.

In the case that the price on one exchange deviates more than 10% from the total volume weighted price of all exchanges covered by the CCCAGG due to incidents such as disabled deposit/withdraws, the price tick on that exchange will be excluded from the calculation.

3 MONTHLY REVIEW

3 Monthly Review

3.1 Index Universe

The index universe includes all crypto currencies traded on the exchanges covered by the CCCAGG pricing provided by Crypto Coin Comparison Ltd. ("CryptoCompare").

3.2 Eligible Index Universe

Crypto assets have to meet specific criteria to be eligible for the Index. These criteria are:

- Must be traded on at least two of the eligible exchanges. The list of approved exchanges is updated and managed on a monthly basis by the Index Committee to ensure that only exchanges providing liquidity, security and reasonable compliance are used. Specifying the source ensures that an asset is traded on a major exchange with sufficient size and liquidity. It also eliminates the risk that the asset's volume comes from trans-mining exchanges.
- The combination of the eligible exchanges must account for more than 20% of the coin's total average 3-month volume (10% if the coin is a current component in the index). These criteria eliminate concentration of volume on certain exchanges. That is, if one of the exchanges fails or the asset gets delisted, there will be smooth trading among the other exchanges.
- Monthly volume must be greater than 20% of the circulating supply (10% if the coin is a current component in the index) over the past 3 months. To eliminate tokens that are illiquid, tokens must have a minimum threshold of trading activity. This is calculated by taking the 3-month sum of an asset's absolute volume in the native coin divided by the circulating supply.
- Available for cold storage and offline transaction signing. This is to make sure there is a method to custody the asset in a secure manner. This may include hardware wallets or qualified custodians that is approved by the Index Committee.
- Must not be pegged to groups of fiat currencies, commodities, crypto assets or any other asset. The requirement excludes stablecoins and other crypto assets that are solely pegged to a hard asset since the index is meant for appreciation. This, however, does not eliminate assets that may be gonce or equity tokens for stablecoins which may grow with the ecosystem.
- Should have not have known security vulnerabilities, including critical bugs or exposure to 51% attacks. A network that has known security vulnerabilities, which has not been patched, will be excluded from the index. Additionally, if an asset has been 51% attacked and not taken acceptable remedial actions over a period of 1 month will be excluded from the index. The asset can be eligible for the index again granted that it has been over 6 months since the 51% attack and that the project has issued remedies to prevent future 51% attacks. Additionally, if over 60% of the hash rate of an asset's mining algorithm can be rented through Nicehash, the asset will also be excluded from the index.
- Must not violate any compliance framework including KYC/AML obligations. The system of holding or sending coins has to be deterministic. If an asset's mechanism has the potential to unknowingly mix coins between other participants of the network, that asset will be excluded due to potential AML risks. The index committee will permit "Layer 2" protocols if they meet the reasonable standard of care with regard to KYC/AML obligations.
- Must have open source code on a platform such as Github. This ensures that the project is still being actively developed and there is clear progress to achieve a developmental goal or periodic maintenance of the repository.

4 ONGOING MAINTENANCE

- Must not be classified by the SEC as a security.

3.3 Index Selection

A maximum of 10 crypto assets ranked by market capitalization are selected for inclusion into the index.

1. The crypto assets fulfilling the universe criteria above are ranked by their market capitalization in descending order.
2. The top 7 crypto assets qualify for selection.
3. The remaining 3 components are selected from the highest ranked existing index components ranked between 8 and 13.
4. If the number of selected components is still below 10, then the highest ranked crypto assets are selected until the number of components equals 10.
5. In case less than 10 crypto assets are eligible, the index is constituted of all eligible assets and has less than 10 components.

3.4 Weighting Scheme

The index is uncapped and weighted by market capitalization. All components are ranked by their market capitalization without a capping. All weighting cap factors are fixed at 1.

4 Ongoing Maintenance

4.1 Changes in Circulating Supply

Circulating supply is all coins in circulation at the current time, including those held by team members or the company. This also includes coins in smart contracts or escrow. If the coins have been issued and have not been burned, they will be accounted for in the circulating supply. Changes in the circulating supply will not be adjusted during the month, but with the next monthly review.

4.2 Changes due to Forks, Airdrops and Network Emissions

4.2.1 Contentious Hard Fork Policy

A contentious hard fork is defined as a mechanism in which the underlying blockchain protocol splits such that the history of the original chain is kept and new assets are created. If the crypto asset hard forks into another ecosystem with a native asset, the newly created asset must pass the same general eligibility criteria as Section (3.2) to be included in the index. In addition, the following criteria are taken into account in order to determine if the forked coin is eligible for the index:

- Open source code: makes code auditing and vulnerability check possible,
- Premine: transparency in terms of the total supply of the Forked Coin and intentions,
- Announcement: the Forked Chain will have to be announced a significant time prior to its activation, in doing so this would demonstrate the seriousness of the intended fork.

4 ONGOING MAINTENANCE

The forks that fulfill the above criteria are further monitored using the following procedure: On the close of first trading day, if the fork trades in at least one of the eligible exchanges and constitutes at least 1% of the index at the time, the fork will be kept in the index. In the next reconstitution, the fork should fulfill all other eligibility criteria as outlined above. If the newly forked coin does not meet the listed exchange eligibility, the fork will not be considered or included in the index. However, if the newly forked coin has a market capitalization less than 1% of the index but listed on one of the exchanges on the eligibility criteria, the asset will be removed from the index after the second day of trading and the proceeds will be distributed proportionally to the rest of the index components.

4.2.2 Airdrops and Network Emissions

If the crypto asset distributes rewards through airdrops or emissions by holding the asset, these rewards will not be considered or included in the calculation of the index given that most rewards have de minimis value. Airdrops are defined as a distribution of small amounts of new crypto assets to community members either for free because of existing crypto asset holdings or for performing certain tasks. Emissions are defined as rewards that holders of certain crypto assets obtain that may also be the asset which powers a network (e.g. Gas).

4.3 Changes to Pricing (CCCAGG)

In case an exchange is added to CCCAGG or removed from it, the index divisor will not be adjusted.

4.4 Trade Suspensions and Market Distortions

There are certain circumstances which might require extraordinary adjustments to the Index. These circumstances include, but are not limited to:

- Longer or recurring outages of an exchange,
- Misconduct of an exchange or with a crypto asset or token has been noticed,
- Sharp decline in trading volumes of certain crypto assets or tokens, certain exchanges or even larger areas of the crypto market in general,
- Implementation of investment restrictions for international investors in certain countries or for certain exchanges,
- A crypto asset or token is reclassified as a security by the SEC,
- A crypto asset or token does not trade any more permanently or for an extended period of time.

For all events that result in a deletion from the index, the deleted component will not be replaced. The additional weight resulting from the deletion will be redistributed proportionally across all other index constituents. The index divisor will be adjusted.

4.5 Index Corrections

Index corrections distinguish between calculation errors and incorrect input data.

- Calculation errors detected within a trading day are corrected immediately. Intraday tick data are not corrected retrospectively.
- Calculation errors that are older or based on erroneous input data are corrected if technically possible and economically viable. If significant differences exist, index values can also be corrected retrospectively.

4 ONGOING MAINTENANCE

4.6 Changes to the Index Guide

Any changes to the Index Guide will be reviewed and approved by the Index Committee and MVIS's Legal and Compliance Department. Legal and Compliance may also request a conclusive description and further information on any change and may consult the operations department on such changes. The key elements to be analysed in this phase of the change process are robustness, transparency, reliability and integrity. The result of the review will be communicated to the operations department. The email will be archived by the operations department.

In case of changes that might immediately change the composition of an index or must be considered material for any other reason also need to be approved by the Independent Oversight Function ("IOF") prior to their publication and implementation.

In case of material changes an advance notice will be published and provided to users. MVIS will generally disseminate a notification related to an Index Guide change 60 days prior to the change. A shorter period of time may be applied at MVIS's discretion if the relevant index has not been licensed for a financial product to a third party. The notice will describe a clear time frame that gives the opportunity to analyse and comment upon the impact of such proposed material change. Any material comments received in relation to the Index Guide change and MVIS's response to those comments will be made publicly accessible after any consultation, except where confidentiality has been requested by the originator of the comments.

4.7 Discretion regarding the Use of Input Data

Pursuant to Art. 12 No.1. (b), MVIS has established the following rules identifying how and when discretion may be exercised in the administration of an index.

In case input data are or appear to be qualitatively inferior or different sources provide different data, or a situation is not covered by the index rules, MVIS may (in coordination with the Index Committee) use or change the data at its own discretion according to the following discretion policy after a plausibility check. This may include:

- Liquidity and size data,
- Event information,
- Other secondary data.

Any changes to input data that MVIS intends to apply because of missing data, different data from different sources or other information concluding the inappropriateness or incorrectness of data must be subject to reasonable discretion. The decision on any change must be required, appropriate, commensurable and in line with the respective index scope and objective and must reasonably consider in a balance weight the interest of Users, investors in related products and the integrity of the market.

Index operations ensures consistency in the use of discretion in its judgement and decision. Employees involved in the operations team must have shown the respective experience and skills. Significant decisions are subject to sign-off by a supervisor. In case of material changes to data the relevant situation will be analysed in detail, described and presented to the IOF and discussed and reviewed with the IOF.

The broad range of possible data quality problems does not allow to define specific steps for each possible instance. MVIS will always weight the different interest of the index users, the integrity of the market and other involved parties and determine the least disadvantageous measure that equally considers the relevant interests best.

4 ONGOING MAINTENANCE

In order to avoid individual decisions on the use of data in similar cases for the future an update of the index rules can be taken into consideration if applicable. Other possible mitigation measures are the change of input data sources or providers and/or own data research where possible and reasonable.

Records are kept about material judgement or discretion by MVIS and will include the reasoning for said judgement or discretion.

4.8 Input Data and Contributor Selection

According to the input data requirements under Art. 11 of the Benchmark Regulation, the following shall apply with regard to the input data used for the management and provision of an index and the relevant input data providers ("Contributors"):

- The input data shall be sufficient to represent accurately and reliably the market or economic reality that the benchmark is intended to measure;
- The input data shall be transaction data, if available and appropriate. If transaction data is not sufficient or is not appropriate to represent accurately and reliably the market or economic reality that the index is intended to measure, input data which is not transaction data may be used, including estimated prices, quotes and committed quotes, or other values;
- The input data shall be verifiable;
- Clear guidelines regarding the types of input data, the priority of use of the different types of input data and the exercise of expert judgement, to ensure compliance with the Index Guide and index methodology and the aforementioned requirements are defined in the Code of Conduct for Contributors; and
- Where an index is based on input data from Contributors, MVIS will obtain, where appropriate, the input data from a reliable and representative panel or sample of Contributors so as to ensure that the resulting index is reliable and representative of the market or economic reality that the index is intended to measure.

In order to control the quality of contributors, MVIS will conduct the following controls:

- Evaluate market share, reputation, quality and cost of possible input data sources and providers before selecting them on the basis of the gathered information and data;
- Compare the input data of one Contributor with the input data from one or more other Contributors in order to ensure the integrity and accuracy of the input data and in case of bad quality replace a Contributor with another Contributor.

MVIS will not use input data from a contributor if it has any indication that the Contributor does not adhere to its Code of Conduct for Contributors and in such a case shall obtain representative publicly available data.

5 CALCULATION

5 Calculation

5.1 Index Formula

The underlying index is calculated using the Laspeyres' formula:

$$Index\ Value = \frac{\sum_{i=1}^n p_i * q_i * cf_i * fx_i}{D} = \frac{M}{D}$$

Where (for all tokens (i) in the Index):

- p_i = price,
- q_i = circulating supply,
- cf_i = weighting cap/floor factor (if applicable, otherwise set to 1),
- fx_i = exchange rate (index currency to USD),
- M = market capitalization of the index,
- D = divisor.

5.2 Input Data

The following rounding procedures are used for the index calculation:

- Rounding to 2 decimal places:
 - index values,
- Rounding to 6 decimal places:
 - divisors (D),
- Rounding to 18 decimal places:
 - prices (p_i),
 - exchange rates (fx_i),
 - weighting cap/floor factors (cf_i).

5.3 Divisor Adjustments

Index maintenance - reflecting changes in circulating supply, events, addition or deletion of tokens to the Index - should not change the level of the index. This is accomplished with an adjustment to the divisor. Any change to the tokens in the index that alters the total market value of the index while holding token prices constant will require a divisor adjustment.

$$Divisor_{new} = Divisor_{old} * \frac{\sum_{i=1}^n p_i * q_i * cf_i * fx_i \pm \Delta MC}{\sum_{i=1}^n p_i * q_i * cf_i * fx_i}$$

ΔMC = Difference between closing and adjusted closing market capitalization of the index.

5 CALCULATION

5.4 Data Correction and Disruptions

MVIS will usually receive information about errors or disruption from calculation agent, index owner, client, internal systems (IT) or by monitoring the respective output.

Incorrect or missing input data will be corrected immediately:

- The error is immediately communicated to the calculation agent, if applicable.
- Calculation agent will be asked to investigate the reason for the error.
- An email will be sent to all affected clients to inform them about the error; this includes the reason for the issue and an estimate on when the issue will be solved.
- MVIS recalculates missing EOD data points and disseminates to vendors and clients.

In case of a material error,

- Legal and Compliance to check the relevant agreements for liability of the calculation agent.
- If MVIS identifies any conduct that may involve manipulation or attempted manipulation of an index by calculation agent it will report this to the regulator.
- Where possible and economically reasonable MVIS will try to use another calculation agent.

Investigations and communication regarding disruptions with calculation agents will be handled by Compliance and Senior Management. They are either caused by disruptions in calculation or dissemination, which might affect different servicers.

- The disruption is immediately communicated to the calculation/dissemination agent, if applicable.
- Calculation/dissemination agent will be asked to investigate the reason for the disruption.
- An email will be sent to all affected clients to inform them about the disruption; this includes the reason for the issue and an estimate on when the issue will be solved.
- MVIS prompts calculation agent to make all efforts to restart index calculation.
- MVIS prompts Dissemination agent to make all efforts to restart index dissemination.
- MVIS recalculates missing EOD data points and disseminates to vendors and clients.
- Legal and Compliance to check the relevant agreements for liability of the calculation/dissemination agent.
- If MVIS identifies any conduct that may involve manipulation or attempted manipulation of an index by calculation/dissemination agent it will report this to BaFin.
- Where possible and economically reasonable MVIS will try to use another calculation and/or dissemination agent.

6 APPENDIX

6 Appendix

6.1 Changes to the Index Guide

Date	IG Version	Change
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7 DISCLAIMER

7 Disclaimer

MVIS has contracted with CryptoCompare Data Limited to maintain and calculate the Index. CryptoCompare Data Limited uses its best efforts to ensure that the Index is calculated correctly subject to the accuracy of any data that has been provided to it by third parties. Irrespective of its obligations towards MV Index Solutions GmbH, CryptoCompare Data Limited has no obligation to point out errors in the Index to third parties. In particular, MVIS is not responsible for the Licensee and/or for Licensee's legality or suitability and/or for Licensee's business offerings. Offerings by Licensee are not sponsored, endorsed, sold, or promoted by MVIS, Van Eck Associates Corporation as its parent company or its affiliates (collectively, "VanEck"), and MVIS and VanEck make no representation regarding the advisability of investing in Licensee and/or in Licensee's business offerings. **MVIS, VanEck AND ITS AFFILIATES MAKE NO WARRANTIES AND BEAR NO LIABILITY WITH RESPECT TO LICENSEE.**