

# LyCI // Lykke Crypto Index

## Specifications

### Introduction

The Lykke Crypto Index (LyCI) tracks the return of a basket of the 25 cryptocurrencies with the highest market capitalisation. The contribution (weight) of each cryptocurrency is determined by its current market capitalisation<sup>1</sup>.

### Evolution of the index

LyCI was initiated on Nov 8th, 2018, 13:19 UTC at  $L_0 = 1'000$  pts. Every minute, the relative return of every constituent,  $r_t^{(i)}$ , is calculated. The new value of the index is calculated as

$$L_t = L_{t-\delta} \sum_i w_i (1 + r_t^{(i)}),$$

where  $\delta = 1$  min and  $w_i$  is the current weight of cryptocurrency  $i$  in the basket.

### Calculation of returns

The returns for the underlying cryptocurrencies,  $r_t^{(i)}$ , is based on an average of cryptocurrency prices in USD over a number of exchanges in order to smooth out return peaks and mitigate manipulation risk. The exchanges contributing to this average will be made transparent on the Lykke webpage.

### Weight of constituents

The weight of constituent  $i$  is defined by

$$w_i = \frac{m_i}{\sum_j m_j},$$

where  $m_i$  is the current market capitalisation of cryptocurrency  $i$ , i.e. it is its relative contribution to the overall market capitalisation of the top 25 cryptocurrencies.

### Rebalancing

“Rebalancing” refers to the ongoing rebalance occurring due to the weights of the cryptocurrencies in the basket being updated in accordance with the most recent market capitalisations. For LyCI, this is done with every calculation of the index value, i.e. on a minute-by-minute basis.

### Restructuring

“Restructuring” means the event whereby the composition of the underlying is revisited due to changes in the current market capitalizations of the cryptocurrencies triggering the exit of one or more cryptocurrencies from the top 25 ones. As a consequence, the constituent cryptocurrencies of the basket are adapted, i.e. constituents that are no longer among those 25 cryptocurrencies with the highest market capitalisation will be eliminated from the basket and substituted by those cryptocurrencies that are.

For LyCI, restructuring is performed on a day-by-day basis at 0:00 UTC.

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<sup>1</sup> At the time of writing, the market capitalisation is sourced from CoinMarketCap (<https://coinmarketcap.com>)

## Allowed instruments

Any cryptocurrency other than stable coins and security tokens is eligible for inclusion in the underlying basket. Lykke retains the right to assess individual tokens for those characteristics and, if applicable, treat them as not admissible for the index.

A list of currently admissible coins (whitelist) will be published on a regular basis on the Lykke webpage. For the sake of clarity, the selection of the admissible coins in whitelist is made at the fullest discretion of Lykke.

## Hard forks of cryptocurrencies

In case of hard forks of any of the cryptocurrencies listed on the whitelist, Lykke will assess the new token and decide - at its own fullest and unfettered discretion - whether or not to insert this new coin into the whitelist.

## Price Feeds Failure, Market Manipulation

In case of reasonable doubt about the legitimacy of market capitalisation feed, including but not limited to unexplained jumps in the market capitalisation, Lykke retains the right to temporarily not perform rebalancing or restructuring of the index.

In case of reasonable doubt about the legitimacy of price feeds, including but not limited to price jumps or high volatility not confirmed at other exchanges, Lykke retains the right to temporarily not include those prices feeds into the return calculation.

## Technical problems

Lykke is committed to providing LyCI on a best-effort base only.

Lykke does not guarantee - and disclaims any warranties, express or implied, of - the fitness for any particular use or purpose of the LyCI.

Lykke provides the LyCI with care and professional accuracy but does not guarantee that LyCI will not be affected by interruptions, suspension delays or anomalies, in whole or in part. However, in case LyCI is affected by the above-mentioned shortcomings, Lykke will make every effort in order to remedy any possible inconvenience.

However, in the unlikely case of technical problems, Lykke may temporarily freeze the evolution of the index, i.e. the index value will not be updated. In that case, the first value of the index after the technical issues have been resolved and the index has been unfrozen, will be calculated as

$$L_t = L_{t-\Delta} \sum_i w_i \left(1 + r_{t,\Delta}^{(i)}\right),$$

where  $\Delta$  is the time difference in which the index has been frozen,  $L_{t-\Delta}$  is the last reliable index value prior to freezing, and  $r_{t,\Delta}^{(i)}$  is the return of the cryptocurrency  $i$  over the full period the index has been frozen. This way, it is assured that no deviation from the performance of the cryptomarket during the freeze period occurs.

## Liability

Lykke publishes the index as an information service.

ANY INDIVIDUAL USING LYCI RELIES SOLELY UPON ITS OWN SKILL, KNOWLEDGE AND JUDGEMENT.

LYKKE SHALL BE LIABLE **EXCLUSIVELY** IN CASE OF DAMAGES CAUSED BY THE PROCESSING AND TRANSMISSION OF THE INDEX, WHICH ARE PROVEN TO BE AN IMMEDIATE AND DIRECT CONSEQUENCE OF LYKKE'S WILLFUL MISCONDUCT OR GROSS NEGLIGENCE.

THE VERIFICATION OF THE ACCURACY, TRUTHFULNESS AND COMPLETENESS OF THE DATA USED TO CALCULATE THE INDEX ITSELF DO NOT FALL AND WILL NEVER FALL WITHIN THE OBLIGATIONS OF LYKKE.

LYKKE IS NOT AND WILL NEVER BE LIABLE FOR ANY DAMAGE TO A THIRD PARTY THAT MAY OCCUR BY USING THE INDEX IN ANY COMMERCIAL AND/OR ANALYTICAL AND/OR FINANCIAL WAY, INCLUDING, BUT NOT LIMITED TO, THE ISSUANCE OF INDEX-TRACKING PRODUCTS, DERIVATIVES THEREOF, OR THE USE OF THE INDEX AS AN OUTPERFORMANCE KPI.

Lykke shall not have any liability in case of errors in - or failure to provide - LyCI that are consequences of causes which are not ascribable to Lykke, by way of example, but not limited to, those depending on:

- a) wars, rebellions, terrorist attacks, earthquakes, floods, fires, and other force majeure events;
- b) nationwide and local strikes (including company strike);
- c) electrical outages or interruptions and/or malfunctioning in the supply of dedicated data transmission lines pertaining to the computerised and telematics systems set up by Lykke, also where such events concern third parties used by Lykke to provide LyCI;
- d) Impediments and obstacles determined by provisions of law, regulations, or by administrative measures or judicial acts.