



COINDEX

CRYPTOCURRENCIES AND CRYPTOASSETS MARKET INDEXES

WHITE PAPER

v 1.1.2 December 11/2017

Coinindex30 is a circulating supply-adjusted market capitalization index that represents the values from 30 of the most representative cryptocurrencies and cryptoassets on the market equivalent to 90+% of the market size, providing a representative, accurate and diversified measure, is the first member of the Coinindex Index Family, and CNDX is an asset whose value strictly obeys to the index level

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COINDEX30 Index

Introduction

Coindex30 is a circulating supply-adjusted market capitalization index that represents the values from 30 of the most representative cryptocurrencies and cryptoassets on the market equivalent to 90+% of the market size.

The Coindex index family reaches the crypto environment to become a standard market measure, for the creation and support of new investment products such as cryptoindex mutual funds, crypto index portfolios, cryptoexchange traded funds, cryptoindex futures and options and to be a real, diversified and representative indicator of the price behavior of cryptographic assets, providing accuracy, reliability and serving as a benchmark either for comparing a crypto asset with the average or the whole crypto market with any other market.

Every financial market requires one or more indices that significantly group the traded assets and reflect their variations such as S&P50 and Dow Jones in the United States, FTSE 100 in London or Nikkei in Tokyo, in the cryptoassets market Coindex30 will be the main benchmark.

Usually the number of indices used to measure a market depends on its depth, volume and capitalization, so in highly liquid markets such as the U. S. stock market there are even dozens of indices that group shares of companies classified by market capitalization, sectors, among others. Although the cryptographic market already has a significant number of assets and transaction volumes, Coindex team has decided to launch an index that groups the 30 most important cryptographic assets in the market, and to project the future launch of other indexes by segment.

Index construction

Eligibility criteria

Market Capitalization

A minimum market capitalization (Circulating Supply x Price) of 150.000.000 US Dollars is required.

Liquidity

A minimum transaction volume of 20,000,000 US Dollars in the last 30 days at any time.

Eligible coins/assets

All assets and/or currencies built in blockchains that have their respective block explorer and are listed in at least 2 of the following exchanges:

- | | | |
|------------|------------|-----------|
| - GDAX | - Bittrex | -Bithumb |
| - BTER | - Bitfinex | -Kraken |
| - Poloniex | -Yunbi | -HitBTC |
| - Jubi | -Bitstamp | -Binance |
| - BTC38 | -Liqui | -GateCoin |

Time in the market

To be included in the index, in addition to meeting all of the above eligibility criteria, the currency and/or asset must have been traded for at least 2 months in two or more of the accepted exchanges.

Deletions

Coins or assets that substantially violate one or more of the addition criteria.

Coindex team believes turnover in index membership should be avoided when possible. At times a coin/asset may appear to temporarily violate one or more of the addition criteria. However, the addition criteria are for addition to the index, not for continued membership. As a result, an index constituent that appears to violate criteria for addition to that index is not deleted unless ongoing conditions warrant an index change. When a coin/asset is removed from an index, Coindex Team explains the basis for the removal.

In the event that an asset and/or currency is removed from the index, a minimum of 2 months must be waited until it is considered again for inclusion.

Index Calculation

Calculation Formula

The formula to calculate the COINDEX30 is:

$$Index\ Level = \frac{\sum_i P_i * Q_i}{Divisor}$$

The numerator is the price of each coin/asset in the index multiplied by the number of coins/assets used in the index calculation. This is summed across all the coins/assets in the index. The denominator is the divisor. If the sum in the numerator is US\$ 100 billion and the divisor is US\$ 50 million, the index level would be 2000. This index formula is sometimes called a "base-weighted aggregative" method. The formula is created by a modification of a LasPeyres index, which uses base period quantities to calculate the price change.

Adjustments to coin/asset counts

COINDEX30 is a circulating supply adjusted index, the number of coins/assets supply is reduced to exclude pre mined coins that are not in the circulating supply yet or mineable coins that have not been mined yet from the index calculation because such coins/tokens are not available to investors.

ASF (Available Supply Factor)

ASF= (available supply)/(total supply)

Where available supply is the total supply less pre mined coins that are not in the circulating supply yet or mineable coins that have not been mined yet.

In the index calculation equation the variable Q_i is calculated:

$$Q_i = ASF * Total Supply$$

Note that any time the share count or the ASF is changed, it will be necessary to adjust the index divisor to keep the level of the index unchanged.

Divisor Adjustments

The key to index maintenance is the adjustment of the divisor. Index maintenance should not change the level of the index. This is accomplished with an adjustment to the divisor.

Any change to the coins/assets in the index that alters the total market value of the index while holding coins/assets prices constant will require a divisor adjustment. This section explains how the divisor adjustment is made given the change in total market value. The next section discusses what index changes lead to changes in total market value and the divisor.

Equation (1) is expanded to show the coin/asset being removed, coin "AB", separately from the coins/assets that will remain in the index:

$$Index Level_{t-1} = \frac{(\sum_i P_i * Q_i) + P_{AB} Q_{AB}}{Divisor_{t-1}}$$

Note that the index level and the divisor are now labeled for the time period t-1 and, to simplify this example, that we are ignoring any possible ASF and adjustments to share counts. After coin/asset AB is replaced with coin/asset XY, the equation will read:

$$Index\ Level_t = \frac{(\sum_i P_i * Q_i) + P_{XY}Q_{XY}}{Divisor_t}$$

In equations (3) and (4) t-1 is the moment right before coin/asset AB is removed from and XY is added to the index; t is the moment right after the event. By design, $Index\ Level_{t-1}$ is equal to $Index\ Level_t$. Combining (3) and (4) and re-arranging, the adjustment to the Divisor can be determined from the index market value before and after the change:

$$\frac{(\sum_i P_i * Q_i) + P_{AB}Q_{AB}}{Divisor_{t-1}} = Index\ Level = \frac{(\sum_i P_i * Q_i) + P_{XY}Q_{XY}}{Divisor_t}$$

Let the numerator of the left hand fraction be called MV_{T-1} , for the index market value at (t-1), and the numerator of the right hand fraction be called MV_T , for the index market value at time t. Now, MV_{T-1} , MV_T , and $Divisor_{T-1}$ are all known quantities. Given these, it is easy to determine the new divisor that will keep the index level constant when coin/asset AB is replaced by coin/asset XY:

$$Divisor_T = (Divisor_{t-1}) * \frac{MV_t}{MV_{t-1}}$$

As discussed below, various index adjustments result in changes to the index market value. When these adjustments occur, the divisor is adjusted as shown in equation (6).

When coins/assets are added to or deleted from an index there is an increase or decrease in the index's market value. This increase or decrease is the market value of the coins/assets being added less the market value of those coins/assets deleted; define CMV as the Change in Market Value. Recalling that the index level does not change, the new divisor is defined as:

$$Divisor_{New} = \frac{MV + CMV}{Index\ Level}$$

However, the first term on the right hand side is simply the Divisor value before the addition or deletion of the coins/assets. This yields:

$$Divisor_{New} = Divisor_{Old} + \frac{CMV}{Index\ Level}$$

With this additive form, the second term (CMV/Index Level) can be calculated for each coin/asset or other adjustment independently and then all the adjustments can be combined into one change to the Divisor.

When a coin/asset is added to or deleted from the index, the net change in the market value of the index is calculated and this is used to calculate the new divisor. The market values of coin/asset being added or deleted are based on the prices, coins/assets outstanding, ASFs and any other share count adjustments. Specifically, if a coin/asset being added has a total market cap of US\$ 1 billion, an ASF of 85% and, therefore, a float adjusted market cap of US\$ 850 million, the market value for the added company used is US\$ 850 million. The calculations would be based on either equation (6) or equation (8) above.

Index Governance and policy

Index real time (By minute) level is shown at Coindex official website.

ASF and INDEX rebalancing is made every day at 12:00 UTC.

Index composition is evaluated every two weeks and changes are made on an as-needed basis, constituent changes are announced five days before they are scheduled to be implemented.

COINDEX30 base date will be defined in the first quarter of 2018 with a base value of 1000 points.

Price, volume and relevant market information is taken from coinmarketcap data.

Every sensible decisions (as inclusions, deletions, rebalancing, etc) will be publicly announced on Coindex web site.

Inclusion criteria include but is not limited to the Eligibility criteria items listed before, also a deep analysis made by Coindex team and external sources will be taken into account



CNDX index token

Introduction

CNDX is an Ethereum based token and a derivative from the COINDEX30 index, its value corresponds at all times to the index level $\pm 10\%$ (the mechanisms for achieving such equivalence will be explained below).

It is a one-of-a-kind instrument, the first token indexed to the COINDEX index family.

Index-based instruments are an excellent investment opportunity and represent a large volume in traditional stock markets, as they offer the opportunity to diversify and obtain results due to the behavior of important market segments and not by isolated assets, in other words, it is investing in the cryptocurrency and cryptographic assets market and not having to choose between one or the other currency/asset and assuming the consequent risks and frictions.

CNDX is an ERC20 standard token, it means it can (and will) be traded on several digital assets exchanges, having a huge market liquidity.

Coindex30 and CNDX price correlation

The fluctuations in the price of the CNDX will correspond directly to the COINDEX30 index level, on the base date the COINDEX30 will have a base value of 1000 points, and the CNDX a base value of 1 USD and thereafter the variation of each index point will mean a change of 0.001USD in the CNDX price. At any time in the future, the deviation may never exceed 10%.

The system for achieving such correlation will be divided into two stages:

1. Board

Initially, and due to the very likely volatility and speculation in the first months and the consequent need to make fast and drastic decisions, a board conformed by founding members of Coindex and external advisors, will have the power to directly intervene in the market whenever necessary with the intention of maintaining continuous correspondence to the index.

When the value of the CNDX is more than 10% higher than it should be, the sale of CNDX from the stability reserve* held by Coindex will be enabled at a slightly lower value than the market value.

In the opposite case, if its price is more than 10% below its index equivalence, or is falling faster than it should, the stability reserve funds raised in the initial token sale (held in ETH, BTC and other high liquid assets) will be used to buy CNDX and consequently raise the price.

Essentially, this strategy consists in creating supports and resistances using the reserve funds (in CNDX and in liquid currencies/assets).

Note that the reserve do not belong to any of the board members, it is held in custody on a multisig wallet.

*The reserve is composed of 35% of the total CNDX tokens created and 80% of the funds raised in the token sale process and is stored in multig wallets and exchanges accounts.

e.g Let's suppose the day after the base date the index level go from 1000 pts to 1070 pts, it means the target price for CNDX token would be 1.07 USD +/-10% (0.963 USD to 1.177 USD) if the average value of the token in the exchanges where is listed goes below 0.963 the board will go extremely bullish on it and will invest as much as necessary to recover the target range. In the case the value goes above 1.177 the opposite thing would happen until the target range is reached.

2. DAO

In the second stage, the decisions regarding intervention in the market are not only taken by a committee, but the power of decentralized organizations is used to establish the policies that will be assumed, always with the intention of maintaining the original idea of the CNDX: its correspondence to the Coindex30 index.

The DAO will have at its disposal 100% of the reserve (in CNDX and in liquid currencies/assets) to intervene in the market whenever necessary.
All CNDX holders will have voting rights proportional to their number of tokens.

The details of the organization, will be communicated in proper time and with a minimum of 3 months prior to its effective date.

Token Details

Total tokens: 100.000.000 (100 M)

Symbol: CNDX

ERC20

Decimals: 6

Token Distribution

35.000.000 (35%)



Token Sale

35.000.000 (35%)



Reserve

10.000.000 (10%)



Bounty

10.000.000 (10%)



Coindex foundation for research and development.

10.000.000 (10%)



Team - advisors

Unsold tokens will go to the reserve.

CNDX Token Sale

The contract address will be published on the Coindex official website
www.coindex.finance

Stages

Token Sale First Week

Total tokens available: 5.000.000

Token Sale Second Week

Total tokens available: 8.000.000

Token Sale Third Week

Total tokens available: 10.000.000

Token Sale Fourth Week

Total tokens available: 12.000.000