# CMC MARKETS TIERED WEIGHT CRYPTO INDEX METHODOLOGY

# INDEX DESCRIPTION

# 1. Definitions:

"**Circulating Supply**" means the number of coins that are circulating in wallets and on exchanges regardless of dormancy. Analogous to "shares in issue" for equity markets;

"CMC Markets" means CMC Markets UK plc (registered number 02448409);

"Index" means the CMC Markets All Crypto Index;

"Index Component" means one of the individual crypto currencies used to construct the Index Price;

"Index Launch Date", means the day on which the Index first begins pricing and from when the base value begins. See "Further Information" for further base value information;

"Index Disruption Event", means any event such as a hard fork that results in a material change and split in the blockchain protocol of an Index Component, resulting in a non-market driven change in price or newly created crypto currency;

"Index Rebalancing", means the adjustment made to an Index by the Index Review Panel post an Index Review Panel meeting;

"Index Review Panel" means the committee that reviews the Index composition at least on the Review Dates or at any other time and which is composed of at least three members of CMC Markets n to be nominated and replaced from time to time by the Group Head of Trading of CMC Markets in London, 133 Houndsditch, London, EC3A 7BX;

"Initial Index Value" means \$10,000,000 calculated in accordance with section 3;

"Qualifying Component" means a component voted for inclusion within the Index by the Index Review Panel;

"Rebalancing Date" means the first Trading Day of the month following a Review Date;

"**Review Date**" means the third Friday of March, June, September or December of each year starting in 2019 or any other date as the Index Review Panel may determine in its sole discretion;

**"Substitution Event**" means the replacement of an Index Component as a result of an Index Disruption Event; and

**"Trading Day"** means a day that CMC Markets is open that is also a trading day on all the relevant exchanges for the Index Components other than a day on which trading on any such relevant exchange is scheduled to close prior to its regular weekday closing time.

## 2. Initial Index Composition and Minimum Number of Index Components

On the Index Launch Date the Index will initially comprise of twelve crypto currencies deemed suitable for inclusion by the Index Review Panel with weightings at two tiers. The five components that also make up the CMC Major Crypto Index will be split equally to collectively make up 60% of the Index weight. The seven components that make up the CMC Emerging Crypto Index will also be split equally and collectively make up 40% of the Index weight.

With a target Initial Index Value of \$10m, the calculated weights will be used to assign a proportion of the Index value to each Index Component which will then determine a number of units per Index Component using the closing prices on the day of the Index Launch Date. The number of units of each Index Component is then rounded to 3 significant figures which may result in a minor difference to the target Index value. See the "Further Information" section for the components, weightings and rounding error percentage.

The Index will initially and at each Index Rebalancing, comprise of the number of Index Components listed in Table 1 (section 7), but may be subject to review if there are less than the number of Index Components listed in Table 1 available, due to an Index Disruption Event.

Between an Index Rebalancing, an Index Component can be deleted from the Index due to Index Disruption Events such as forks.

# 3. Index Composition and Method of Calculation

On the Index Launch Date (t=0) the Index value will have an Initial Index Value of \$10,000,000 (as calculated below).

$$IV_{(0)} = \sum_{i=1}^{n} X_{(i,0)} * P_{(i,0)}$$

Where:

IV <sub>(0)</sub>	= Initial Index Value on Trading Day t=0	
X(i,0)	= Number of units of component i in the Index after cap and floor rules have been applied	
<b>P</b> (i,0)	= Price of component i in the Index on Trading Day t=0	
n	= Number of components in the Index on Trading Day $t=0$	

The price of the Index ("Index Price") will then be calculated using the following formula:

$$IP_{(s)} = \frac{\sum_{i=1}^{n} X_{(i,t)} * P_{(i,s)}}{D_{(t)}}$$

Where:

 $IP_{(s)}$  = Current Index Price at time **s** 

P<sub>(i,s)</sub> = Last published CMC Markets bid or ask price of component **i** at time **s** 

n = Number of components in the Index on Trading Day t

 $X_{(i,t)}$  = Number of units of component **i** in the Index on Trading Day **t** after cap and floor rules have been applied

D<sub>(t)</sub> = Index Divisor (as defined below) on Trading Day **t** 

The divisor is a number used to calculate the Index and set the Index Price at a base of 2,000 ("**Index Divisor**"). If the market capitalization of the Index changes due to an event such as a fork, then a new Index Divisor will be calculated based on the close prices of the day before the Index Disruption Event to keep the Index Price the same.

#### 4. Index Disruption Event

If, in the determination of the Index Review Panel, an Index Disruption Event has occurred, the Index Review Panel will decide on the best course of action as to whether to remove or continue to include the Index Component within the Index. In either case, a new Index Divisor will be calculated using the prices of all Index Components at the time of the last price published before the Index Disruption Event of the affected Index Component.

#### 5. Quarterly Review of the Index

The Index shall be reviewed by the Index Review Panel on each Review Date. On the Review Dates, all Index Components will be viewed in descending order by their current weighting within the Index. Any Index Component that breaches the cap or floor weight shall be reweighted as per the method on the Index Launch Date and a new number of units per Index Component calculated.

The basis for the rebalancing shall be the respective prices of the Index Components on the relevant Rebalancing Date whereby the Index value after the Rebalancing Date shall be equal to the Index Price before the Rebalancing Date.

If, in the determination of the Index Review Panel, an Index Disruption Event has occurred on any Rebalancing Date, the Rebalancing Date shall be postponed to the first succeeding Trading Day on which the Index Review Panel determines that there is no Index Disruption Event.

### 6. Index Component Substitution

The Index Review Panel will determine if each of the Index Components still qualifies as a Qualifying Component at each Review Date. If a Substitution Event occurs, the affected Index Component (the **"Outgoing Component"**) shall be substituted by an alternative Index Component on the Rebalancing Date, subject to an Index Disruption Event.

The Index Review Panel shall substitute for such relevant Outgoing Component a new Index Component with effect from the Rebalancing Date.

If no Qualifying Component exists, the Index Component value of such Outgoing Component will be distributed proportionally in the remaining Index Components.

The basis for the substitution shall be the respective prices of the Index Components on the relevant Rebalancing Date.

#### 7. Further Information

### CMC Markets All Crypto Index

#### General description:

The **CMC Markets All Crypto Index** tracks the performance of an initial 12 crypto currencies chosen by the Index Review Panel and comprised of all components of the CMC Major Crypto Index and the CMC Emerging Crypto Index.

The Index was created with a base level of 2,000 as of 31<sup>st</sup> December 2018.

#### Index Components on Index Launch Date:

#### Table 1

Component i	Initial weighting w(i,0)
Bitcoin	12.00%
Ethereum	12.00%
XRP	12.00%
Bitcoin Cash	12.00%
Litecoin	12.00%
EOS	5.71%
Stellar Lumens	5.71%
Cardano	5.71%
TRON	5.71%
Monero	5.71%
Dash	5.71%
NEO	5.71%

The percentage rounding error for the CMC All Crypto Index is 0.01714%.