

Proposal of Huobi 10 Index

Huobi 10 Index is launched on Huobi Pro in 23rd May 2018, and is composed of 10 digital assets (collectively referred to as the CDAs, and singularly referred to as the “CDA”), with high market value, large scale and good liquidity in order to reflect the overall performance of Huobi Pro market.

1. Selection of sample coins

(I) Sample space

The sample space is consist of all listed assets that are traded in terms of USDT on Huobi Pro.

(II) Methods of sampling

Huobi 10 index will regularly get the data of the daily turnover of the previous quarter as basis to form the sample selection pool. The daily average data serves a function to reduce the abnormal impact caused by the price volatility of each single-day, therefore is able to indicate the liquidity of digital assets during a particular period efficiently. Similarly, the periodically proportion of each CAD in the index will be determined in the light of the average data of the daily turnover of each CAD in the previous quarter.

An index sample will be selected according to the following steps:

- The average daily turnover of all USDT pairs on the previous quarter is calculated;
- In light of the nature of the blockchain assets, the blockchain assets presently are categorized into four groups: coin, platform, application and utility asset. The utility asset token is expressly excluded from Huobi 10 Index as it represents the value of assets in kind. The proportion of the average daily turnover of each group over Huobi 10 Index the average

total daily turnover of all assets in the last quarter is recorded, and the number of eligible assets in each group is then decided, depending on the result of the index ratio of each group;

Stipulated Formula to decide the ratio of coins:

$$\text{Number of type A asset coin} = \frac{\text{per average daily trading volume of assets of area A in the previous quarter}}{\text{total daily trading volume of all coins in the previous quarter} \times \text{number of coins}} \times \text{number of coins}$$

- Within each group, a ranking list will be produced in accordance with the data of the average daily trading turnover of the last quarter, top performance assets will be nominated as index samples.
- In the event that the number of the listed assets of a particular group is less than the number required under the stipulated group ratio, the method mentioned above will be applied to select another top ranking asset to fill the vacancy. That is non-elected assets will be ranked by its relative proportion of daily average trading turnover and highest ranking assets within it will accordingly be selected.

(III) Short list

Each time the sample coin is adjusted regularly, the list of alternate coins is 25% of the number of the index sample currency, and five alternate coins are set up. When an unexpected delisting occurs in the index component, the sample is temporarily replaced, and the coin that is ranked first in the candidate list is selected as the sample coin in turn.

(IV) Instruction of sample selection methods.

Assuming that 5 tokens are selected as the sample to calculate the index, there are currently 10 coins in the sample space. The sample selection

method is carried out in the following steps:

Sample space

Asset type	Coin	Proportion of average daily trading volume in the last quarter
Type A	A1	11%
	A2	9%
Type B	B1	12%
	B2	20%
	B3	18%
	B4	10%
Type C	C1	13%
	C2	2%
	C3	5%
Total		100%

1. Calculation of the sample number of eligible assets in different groups:

$$\text{Number of type A selected} = (11\% + 9\%) \times 5 = 1$$

$$\text{Number of type B selected} = (12\% + 20\% + 18\% + 10\%) \times 5 = 3$$

$$\text{Number of type C selected} = (13\% + 2\% + 5\%) \times 5 = 1$$

2. Rankings of the daily average trading volume in the previous quarter

Asset type	Ranking	Coin	Proportion of average daily trading turnover in the last quarter
Type A	1	A1	11%
	2	A2	9%
Type B	1	B2	20%
	2	B3	18%
	3	B1	12%
	4	B4	10%
Type C	1	C1	13%
	2	C3	5%
	3	C2	2%
Total			

3. According to the number of eligible asset sample, the following sample are determined:

Asset type	Place	Coin	Proportion of average daily trading turnover in the last quarter
Type A	1	A1	11%
Type B	3	B2	20%
		B3	18%
		B1	12%
Type C	1	C1	13%
Total			74%

II. Baseline

The baseline of Huobi index is 23rd May 2018. Market value during the reporting period is adjusted comparing to the base date and the index is calculated accordingly.

III. Calculation of index

The unit of Huobi 10 index is "points" and the numeric precision is with four decimal points.

3.1 Base date and base period

The baseline period of Huobi index is 23rd May 2018, the date the index launched, and the basic point is 1000.

3.2 Calculation method of index

The Huobi 10 Index is calculated by Paasche weighted composite price index formula, which is as follows:

$$I_j = \frac{\sum_{i=1}^n p_i \cdot w_i^j}{N_j} \times 1000$$

I_j is the real time index price of number j period. p_i is the latest transaction price of the number i coin. w_i^j is the adjustment coefficient of the number i coin in the j period. The adjustment coefficient is calculated in the formula as follows:

$$\text{Adjustment coefficient } (w_i^j) = \frac{\text{Average daily trading volume of the number } i \text{ coin of the } j \text{ period in the last quarter}}{\text{Average daily trading volume of the all coins of the } j \text{ period in the last quarter}}$$

N_j is the standardized divisor of the j period, and in the base period, ($j = 0$), $N_0 = \sum_{i=1}^n p_i \cdot w_i^0$. (You can refer to chapter IV for the adjustment of N_j after the base period).

3.3 Index real-time calculation

The transaction price of the Huobi index comes from the Huobi trading system. According to the formula of index calculation, the real-time index is calculated every 15 seconds. The transaction price of each token pair is established according to the following principles:

Prices of ample trading pairs (P_i) = latest transaction price.

IV. Index amendments

To ensure the continuity and comparability of the index, Huobi 10 Indexit will be periodically modified by adjusting the baseline period regularly, and on the first calendar day of each quarter, Huobi Pro will calculate the adjustment coefficient base on the historical transaction data of the previous quarter. In addition, the index will be adjusted in accordance with the exponential adjustment rules if:

1. Huobi 10 Index adds trading pairs.

2. Huobi 10 Index reduces trading pairs.
3. Trading in the index is suspended in long periods.
4. Other contingencies where adjustments to the index are necessary.

Huobi 10 Index adopts the revised "Divisor Correction Method" to amend the standardized divisor.

Amendment formula:

$$\frac{\sum_{i=1}^n p_i \cdot w_i^j}{N_j} = \frac{\sum_{l=1}^n p_l \cdot w_l^{j+1}}{N_{j+1}}$$

Among them: $\sum_{i=1}^n p_i \cdot w_i^{j+1}$ is the result of the calculation after adjusting the coins and weights.

V. Maintenance of sample assets

In order to ensure the Huobi 10 Index accurately indicates the transaction of the relevant blockchain assets in a timely and accurate manner, the sample assets will be monitored regularly in accordance with the following rules:

- The range of sample space is updated at the beginning of each quarter according to the historical transaction data of the last quarter;
- The classification of sample assets has changed and its group will be replaced on the next preset adjustment date;

The assets listed on Huobi pro after the base period are included in the sample size in the next adjustment period.

Appendix:

Criteria for the classification of global blockchain assets

According to the different nature of the block chain assets, the Huobi Blockchain Application Research Institute divides it into four categories: "coin", "platform" "application" and "Utility asset token".

"Coin" refers to an asset developed on the basis of blockchain technology and its main function is only the subject of the transaction, the value of which is mainly reflected through liquidity.

The "platform" coin refers to the development of the underlying technology of the blockchain and supported by the right to use the platform or the right to participate in the platform.

The "application" coin refers to the asset associated with a specific application scenario and supported by a certain right of use, participation or dividend.

The "utility asset token" refers to the actual asset such as gold, dollar and etc.

(I) Coin

Capacity: More than 1,000 varieties;

Function: The "medium of exchange" in the field of blockchain assets;

Market: At present, Bitcoin owns the highest market value;

Typical products: Bitcoin, Litecoin;

Main index: Number of participating nodes, liquidity.

(II) Platform.

Capacity: About 10 varieties;

Function: Establish technical platform to provide basic technical support for various application development;

Market: A considerable number of platforms are under development.

Institutional exchange accounts for a certain share in this field. Currently, Ethereum has the largest market value;

Typical products: Ethereum, Fabric, NEO and so on;

Main indicators: Technical indicators, development progress and so on;

(III) Application.

Capacity: About 300 varieties;

Functions: Covers many fields such as finance, supply chain management, social networking, energy, property right protection, etc.;

Market: The current fastest growing blockchain assets;

Typical product: OMG;

Main indicators: Development progress, number of participating nodes, etc.;

(IV) Utility and physical asset tokens.

Capacity: no more than 10 varieties;

Function: Linking assets such as gold and US dollars is a blockchain mapping of physical assets;

Market: As the definition of laws in various countries is not yet clear, the current market capacity is small, but combined with asset securitization, the prospects are huge;

Typical product: DigixDAO, each token represents 1 gram of gold certified by the London Bullion Market Association.

火币主力指数编制方案

火币主力指数是由火币全球专业站上线币种中市值高、规模大、流通性好的 10 个币种组成，以综合反映火币全球专业站市场的整体表现。

一、样本币选取

（一）样本空间

火币主力指数样本空间为火币全球专业站上线交易的全部 USDT 交易币种。

（二）选样方法

火币主力指数主要以上一个季度的日均成交额作为选样的核心指标。采用日均数据能降低单日价格波动性影响，更好地体现审核期内数字资产的流动性水平。此外本指数将根据各类区块链资产的上一季度日均成交额之和作为权重确定不同种类区块链资产的指数成份占比。

按照以下方法选取指数样本：

- 计算上市所有 USDT 交易对上一个季度日均成交额；
- 按照区块链资产类型分别汇总各类资产的上一季度日均成交额（目前火币将数字资产分为四大类：币、平台、应用、实物资产代币。其中实物资产代币由于代表实物的价格，不纳入指数范围）占总日均成交额比重确定入选的成份币数量；

成份币名额公式：

$$A \text{ 类资产成份币数} = \frac{A \text{ 类区资产上一个季度日均成交额}}{\text{所有币种上一个季度日均成交额}} \times \text{成份币总数}$$

- 在各类资产内部按照上一个季度日均成交额排名，选取排名在前的币种作为指数样本。

- 当某一类区块链资产的现有上市币种数量小于其权重决定的名额数量时，对其他类别资产未入选币种再次按上一个季度日均成交额占所有币种日均成交额之和的比例排名，取排名靠前的币种。

（三）备选名单

每次样本币定期调整时，备选币名单为指数样本币数量的 25%，设置 5 个备选币。当指数成份出现意外退市等情况时临时更换样本，依次选择备选名单中排序靠前的币种作为样本币。

（四）选样方法说明

假定选择 5 个代币作为样本计算指数，目前样本空间中 共有 10 个币种。本指数的样本选取方法按照以下的步骤进行：

样本空间

资产类型	币种	上一季度日均成交额占比
A 类	A1	11%
	A2	9%
B 类	B1	12%
	B2	20%
	B3	18%
	B4	10%
C 类	C1	13%
	C2	2%
	C3	5%
总计		100%

1. 计算各类资产的样本名额：

$$A \text{ 类入选样本数} = (11\% + 9\%) \times 5 = 1$$

$$B \text{ 类入选样本数} = (12\% + 20\% + 18\% + 10\%) \times 5 = 3$$

$$C \text{ 类入选样本数} = (13\% + 2\% + 5\%) \times 5 = 1$$

2. 在各类资产内部按上一季度日均成交额排序：

资产类型	排名	币种	上一季度日均成交额占比
A 类	1	A1	11%

	2	A2	9%
	1	B2	20%
B 类	2	B3	18%
	3	B1	12%
	4	B4	10%
	1	C1	13%
C 类	2	C3	5%
	3	C2	2%
总计			

3. 根据各类资产样本名额，确定样本：

资产类型	名额	币种	上一季度日均成交额占比
A 类	1	A1	11%
		B2	20%
B 类	3	B3	18%
		B1	12%
		C1	13%
C 类	1	C1	13%
总计			74%

二、定基

指数基期应当选择市场较为正常、平稳且成交起伏不大的时期，以避免基期失准。此外为克服报告期与基期之间跨度太远而带来的计算上的麻烦，火币主力指数以 2018 年 5 月 23 日为基期。报告期调整市值与基期对比计算综合价值指数。

三、指数计算

火币主力指数以“点”为单位，精确到小数点后四位。

3.1 基期日与基期

火币主力指数以 2018 年 5 月 23 日为基期日，基点 1000 点。

3.2 指数计算方法

火币主力指数采用派许加权综合价值指数公式进行计算，公式为：

$$I_j = \frac{\sum_{i=1}^n p_i \cdot w_i^j}{N_j} \times 1000$$

其中， I_j 为第 j 期的实时指数价格； p_i 为第 i 种成份币的最新成交价； w_i^j 为第 i 种成份币在第 j 期的调整系数，调整系数计算公式如下：

$$\text{调整系数}(w_i^j) = \frac{\text{第}j\text{期上一季度第}i\text{种成份币日均成交量}}{\text{第}j\text{期上一季度所有成份币日均成交量}}$$

N_j 为第 j 期的标准化除数，在基期（ $j = 0$ ）， $N_0 = \sum_{i=1}^n p_i \cdot w_i^0$ 。（关于 N_j 在基期以后的调整方式参考第四章指数修正）。

3.3 指数实时计算

火币主力指数成交价格来自于火币交易系统，根据指数计算公式每 15 秒重新计算一次实时指数，各样本币的成交价格根据以下原则确立：

样本交易对计算价格（ p_i ）=最新成交价

四、指数修正

为保证指数的连续性和可对比性，火币主力指数采用定期动态调整基期的方式定期对指数进行修正，每季度第一个自然日根据上个季度的历史成交数据更新指数计算调整系数，此外若出现以下情况将根据指数维护规则对指数进行调整：

1. 指数增加新的交易对
2. 指数减少新的交易对
3. 指数内交易对出现长时间暂停交易的情况
4. 其他有必要对指数进行调整的意外情况

指数修正采用“除数修正法”修正标准化除数

修正公式：

$$\frac{\sum_{i=1}^n p_i \cdot w_i^j}{N_j} = \frac{\sum_{l=1}^n p_l \cdot w_l^{j+1}}{N_{j+1}}$$

其中： $\sum_{i=1}^n p_i \cdot w_i^{j+1}$ 为调整成份币和权重之后的计算结果。

五、样本币维护

为确保指数能够及时准确反映相关区块链资产的交易情况，火币将按照以下规则对样本币进行定期或临时维护：

- 每季度初根据上季度历史成交数据更新样本币范围；
- 样本币分类出现变化，将在下一个定期调整日更换其所属类别；
- 在基期后在火币全球专业站上线的币种在下一个调整期纳入样本空间。

附件：

全球区块链资产分类划分标准

火币区块链应用研究院根据区块链资产代表权益属性的不同将其分为“币”、“平台”“应用”和“实物资产代币化”四类。

币指基于区块链技术开发的，不对应于特定的使用场景且主要功能仅为交易标的一类资产，其资产价值主要通过流动性体现；平台指与区块链底层技术开发相关联，且以该类平台使用权或参与权为支撑的一类资产；应用指与针对特定应用场景相关联，且以一定的使用权、参与权或分红权为支撑的一类资产；实物资产代币化指与实际资产如黄金、美元等挂钩。

（一）币

容量：超过 1000 个品种；

功能：区块链资产领域的“交换媒介”；

市场：目前市值最高的是比特币；

典型产品：比特币、莱特币；

主要指标：参与节点数、流动性

（二）平台

容量：约 10 个品种；

功能：建立技术平台，为各种应用开发提供基础技术支撑；

市场：相当一部分平台处于开发状态，机构兑换在该领域占据一定份额，目前市值最大的是以太坊；

典型产品：以太坊、Fabric、小蚁等；

主要指标：技术指标、开发进度等；

（三）应用

容量：约 300 个品种；

功能：涵盖金融、供应链管理、社交、能源、产权保护等诸多领域；

市场：目前区块链资产增长最快的领域；

典型产品：OMG；

主要指标：开发进度、参与节点数等；

（四）实物资产化代币

容量：不超过 10 个品种；

功能：挂钩黄金、美元等资产，是实物资产的区块链映射；

市场：由于各国法律界定尚未明确，目前市场容量较小，但和资产证券化结合，想象空间大；

典型产品：DigixDAO，每个代币代表 1 克由伦敦金银市场协会认证的黄金。