ix CRYPTO INDEX
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Methodology

For Managing the Ix Crypto Index

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Amendment History

	Date	Description
1.0	December 2018	First Issue
1.1	January 2020	Updated Constituents Enhancement Rule
1.2	September 2020	Updated Conflict of Interest Rule

Contents

1. Introduction

1.1. This document describes the general maintenance policies and detailed guidelines for the management of the ixCrypto Index.

1.2. The ixCrypto Index ("IXCI") serves as a market benchmark that reflects the overall performance of the world crypto market.

1.3. The IXCI was launched on 12 December 2018 and is the earliest crypto market index in Hong Kong. The IXCI measures the performance of the largest and most liquid cryptocurrencies listed in the world.

1.4. The IXCI is a free float adjusted market capitalisation weighted index with a cap on the weighting of individual constituent cryptocurrency and is calculated and disseminated daily.

1.5. IX Asia Ltd reserves the right to determine the most appropriate implementation method and will announce it prior to the changes becoming effective as soon as practicable.

2.   Management Responsibility

IX Asia Company Limited ("IX Asia")

2.1.   IX Asia is responsible for creating and compiling index methodology.

2.2.   IX Asia is responsible for monitoring market evolutions and any special actions and do adjustments to the Index Methodology.

IX Fintech Company Limited ("IX Fintech")

2.3.   IX Fintech is responsible for conducting regular reviews according to Index Methodology.

2.4.   IX Fintech is responsible for calculating and disseminating the Index according to Index Methodology.

2.5.   IX Fintech is responsible for giving advice on any issues related to the Index Methodology.

3. Constituents Eligibility

Universe

3.1. A cryptocurrency is included in the universe if it fulfils both the following eligibility criteria.

(a) The cryptocurrency must fit the definition of a cryptocurrency; and

(b) The cryptocurrency must be traded publicly, and actively traded on at least two (2) exchanges

Eligible Cryptocurrencies

3.2. A cryptocurrency is eligible for constituent selection if it meets the market capitalization ranking and the liquidity screening selection as follows:

Market Capitalization Ranking

3.3. The cryptocurrency should be among the top n% free float adjusted market capitalization ("adjusted MC"), where n represents the total percentage after including the last eligible cryptocurrency and such percentage should not in any case be lower than 80%.

Liquidity screening

3.4. The cryptocurrency should rank in top 25 in terms of 90-day average trading volume.

3.5. If the cryptocurrency in top N in terms of adjusted MC cannot meet the liquidity requirement, it will be kicked off and replaced by the next one or more eligible cryptocurrencies until the total coverage exceed 80%.

Principles of Final Selection

3.6. Cryptocurrencies meeting all of the above eligibility requirements will be considered for inclusion in the IXCI.

3.7. The final selection will be decided by IX Asia after the above criteria have been taken into consideration.

http://ix-index.com/

Number of Constituents

3.8. The number of constituents is a variable. It is subject to change after quarterly review when above conditions are met.

Conflict of Interest Rule (Effective Oct 2ⁿᵈ, 2020)

3.9. To keep the index neutral and fair, the constituents of the ixCrypto Index will exclude the coins managed/ operated by any organizations that would have conflict of interest with the index. These organizations may include crypto exchanges, crypto funds, etc.

4. Index Review and Constituent Changes

Regular Quarterly Review

4.1. IX Fintech undertakes regular quarterly reviews of IXCI constituents with data cut-off dates of end of March, June, September and December each year. The review day will be every last weekday of March, June, September and December each year in HKT.

4.2. A quarterly review is normally completed within three weeks after the end of each calendar quarter.

4.3. In each review, there may or may not be constituent additions or deletions. Eligible candidates will be selected as constituents of the ixCrypto according to rules below.

Buffer rule

4.4. In order to avoid frequent change of constituents, a 5% buffer zone is set for market capitalization. It means that, in term of adjusted MC, only when the sum of constituents' weights is below 75%, it need reconstitution.

4.5. Combining the buffer rule and liquidity requirement together, when the coverage falls below 75% or any existing constituent's 90-day average trading volume drop below the top 25. A reconstitution will be conducted to select the new constituents according to principles stated in 3.2-3.8.

Announcement and Effective Date

4.6. Announcement dates of constituent changes will be the second Friday after the cut-off dates of March, June, September and December.

4.7. Effective dates of constituent changes will be the third Friday after the cut-off dates of March, June, September and December.

4.8. If the first Friday after the cut-off date is a Hong Kong public holiday, the announcement day and effective day will be postponed for one week, i.e. announcement day on the third Friday and effective day on the fourth Friday.

Fast entry rule

4.9. At any time, a new crypto will be added if it meets below requirements for 5 consecutive days:
(a) Daily trading volume ranks top 2.
(b) Market capitalization is more than 30% weighting of the total market capitalization.
(c) The fast entry addition will normally be implemented after the close of the 10th trading day.

Constituents Enhancement Rule (effective 6th January 2020)

4.10. After the enhancement, if there are more than one cryptocurrency which shall be included in the new constituents according to market capitalisation ranking and liquidity screening but not being included due to the above captioned rule of no changes, a reconstitution will now be conducted to include the new constituents with bigger market capitalisation and meet the liquidity screening according to principles stated in Methodology Paper 3.2-3.8.

5. Index Calculation

Weighting Scheme

5.1. All constituents are initially weighted by their adjusted MC. In order to avoid overweighting, the maximum weight for any constituents is 40% (Cap) of the Index's adjusted MC. If a constituent exceeds the Cap, its weight will be reduced to the Cap and the excess weight shall be redistributed across all other constituents.

For example, the initial weights are as below.

	A	B	C	D	E
Initial Weight (%)	50	20	15	14.5	0.5

Cap adjusted

$$w_{A,adjusted} = \min(w_{A,initial}, 40) = 40$$

$$w_{B,adjusted} = w_{B,initial} \times \frac{100 - w_{A,adjusted}}{100 - w_{A,initial}} = 24$$

$$w_{C,adjusted} = w_{C,initial} \times \frac{100 - w_{A,adjusted}}{100 - w_{A,initial}} = 18$$

$$w_{D,adjusted} = w_{D,initial} \times \frac{100 - w_{A,adjusted}}{100 - w_{A,initial}} = 17.4$$

$$w_{E,adjusted} = w_{E,initial} \times \frac{100 - w_{A,adjusted}}{100 - w_{A,initial}} = 0.6$$

So, the adjusted weights are as below.

	A	B	C	D	E
Adjusted Weight (%)	40	24	18	17.4	0.6

Calculation Scheme

5.2. The Index level is calculated using the following formula:

$$CyptoIndex_t = \frac{\sum_{i=1}^{x} P_{i,t} \times S_i \times F_i}{D_t}$$

Where

$CyptoIndex_t$ = the index level on day t

$P_{i,t}$ = the report price for Constituent i on day t, in USD

S_i = Circulating Supply for Consituent i in current quarter

F_i = Cap factor for Constituent i,

D_t = Index Divisor

x = Number of constituents

5.3. The Cap Factor is calculated as:

$$F_i = \frac{w_i, adjusted}{w_i, initial}$$

Where

F_i = Cap factor for Constituent i,

$w_i, adjusted$ = Cap adjusted weight for constituent i

$w_i, initial$ = Initial weight for constituent i

5.4. Initial Divisor is calculated as:

$$D_0 = \frac{\sum_{i=1}^{x} P_{i,0} \times S_i \times F_i}{Baseline}$$

Where

D_0 = Divisor on inception day

$P_{i,0}$ = the report price for Constituent i on inception day, in USD

$S_i = Circulating\ Supply\ for\ Consituent\ i\ in\ current\ quarter$

$F_i = Cap\ factor\ for\ Constituent\ i$

$Baseline = 1000, which\ is\ the\ inception\ index\ level$

x = Number of constituents

6. Index Rebalancing

6.1. IX Fintech undertakes regular quarterly index rebalancing with data cut-off dates of end of March, June, September and December each year.

6.2. The announcement and effective dates are consistent with reconstitution dates as stated in 4.6-4.7.

Divisor adjustments

6.3. When constituents are changed, re-calculate the divisor using new constituents:

$$D_{new} = D_{old} \times \frac{\sum_{i=1}^{x} P_{i,t} \times S_i \times F_{i,new}}{\sum_{i=1}^{n} P_{i,t} \times S_i \times F_{i,old}}$$

Where

D_{old} = Old Index Divisor in previous month

$P_{i,t}$ = the report price for Constituent i on day t, in USD

S_i = Circulating Supply for Constituent i in current quarter

$F_{i,new}$ = Cap factor for Constituent i in new $quarter$

$F_{i,old}$ = Cap factor for Constituent i in $previous$ $quarter$

x = Number of new constituents

n = Number of old constituents

7. Dissemination

7.1. Inception

Inception date: 03/12/2018 (HKT)

Inception index level: 1000

7.2. Publishing Hour

On every Hong Kong business day, the daily index will be published at **12:00 noon HKT**,

the hourly index is available from **9 am - 9 pm HKT** and updated at every :00 of the hour.

7.3. Dissemination methods

(a) Facebook: https://www.facebook.com/ixOptionHK/

(b) Website: http://ix-index.com/

(c) IX Option Application [TBD]

8. Disclaimer

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