

**Methodology for TokenInsight General
Payment Token Index of Blockchain
Industry**

TokenInsight Inc.

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1. Introduction

The TokenInsight General Payment Token Index (hereafter referred to as TIGPT index), created and developed by TokenInsight Inc., is a component index designed to measure the overall performance of the general payment tokens in the blockchain industry, consisting of 10 representative exchange listed tokens.

2. Sample Space

The sample space of the TIGPT index consists of tokens that meet all the following conditions:

- According to TokenInsight Industrial Classification, the tokens are defined as General Payment Token
- General payment tokens that have been listed on exchanges for more than 2 months, or general payment tokens with an average daily market value ranking in the top 5 since their listing;
- Exclude tokens with a rating lower than B grade, according to TokenInsight Risk Ratings;
- General payment tokens with trading volume not overly concentrated or dedicated to a single exchange;
- The price of a token freely floating and there are no obvious abnormal fluctuations;
- Excludes other tokens that the index committee has determined should be excluded.

3. Sampling

In order to ensure that the index has high market representation and good investment value, the TIGPT index has selected 10 general payment

tokens with large scale and high circulating qualities as samples. The sampling method is as follows:

- Calculate the Average Daily Traded Volume (ADTV) and Average Daily Circulating Market Capitalization (ADCMC) of all tokens within our determined sample space within the last month;
- Sort the tokens in the sample space by ADTV and ADCMC from highest to lowest, and then exclude the tokens that are in the bottom 25% in both criteria;
- Sort the remaining tokens from highest to lowest by their market capitalization in the last month and select the top 10 tokens as samples.

4. Index Calculation

The TIGPT index is measured in "points" and is accurate to 2 digits spaces after the decimal point.

4.1 Base Date and Base Period

The TIGPT index uses 8:00 AM GMT, 5th November 2018 as the base date; 1000 points as the base point; and adjusted circulating market capitalization of 10 component Tokens on base date as the base period.

4.2 Index Calculation Methodology

TIGPT index is calculated by Laspeyre's Weighted Composite Price Index Formula. The formula is as follows:

$$TIG = \frac{\text{adjusted circulating market capitalization of component token}}{\text{base period}} \times 1000$$

The adjusted circulating market capitalization equals the product of the market price of one specific token and its adjusted circulating supply. Besides, the base period is also called the divisor. Given that each token is

circulated on many exchanges and its concentration is diversified, the market price is thus calculated through a weighted method. The ratio, being the market capitalization of each exchange to the total market capitalization, is used as the weighted coefficient.

Since the circulating supply of one specific token may change frequently, TokenInsight Inc. uses adjusted circulating supply to calculate its TIGPT index in order to maintain a moderate stance. The adjusted circulating supply is the on the latest index modified on that day and is update with index modification.

When there are changes on the component list, or from non-trading factors such as adjusted circulating supply, TokenInsight Inc. uses *the divisor modification approach* to modify the old divisor to guarantee the continuity of its TIGPT index. Details are described in section 5 of the *index modification chapter*.

4.3 Real-time Index calculation

The TIGPT index is calculated in real time, with real-time transaction prices and data for component tokens coming from the Tokenin website.

When an unusual situation occurs on the exchange, TokenInsight Inc. will continue to calculate the index depending on the situation that has taken into place.

5. Index Modification

When a change in the list of component Tokens or a change in the adjusted circulating supply market of such Tokens caused by non-trading factors take place, TIGPT index will use *the divisor modification approach* to restructure the original divisor in order to guarantee the continuity of

TIGPT index.

5.1 Correction Formula

TIGPT index will use the *the divisor modification approach* to modify, the modified formula as follows:

$$\frac{\text{Adjusted circulating market capitalization prior to modification}}{\text{old divisor}} = \frac{\text{Adjusted circulating market capitalization after modification}}{\text{new divisor}}$$

The adjusted circulating market capitalization after modification equals the sum of the adjusted circulating market capitalization prior to modification and the newly increased(decreased) adjusted circulating market capitalization.

Hence, the new divisor can be obtained from this formula (that is, the divisor after modification, also known as the new base period) and future index will be calculated based on this change.

5.2 Situations Need to be Corrected

- Adjustment: When the periodic or temporary adjustment of the index sample token takes effect, the index will be corrected before the effective date;
- Security Issues: When a sample token continues to encounter hacker attacks, other security problems, zero value, or is prohibited by law from trading, it will be removed from the sample pool.

6. Periodic Review of Component Tokens

The TIGPT index reviews the components of each token every 1

month in accordance with the principle of combining sample stabilization and dynamic tracking and adjusts are made to the index component tokens according to its relevant results.

6.1 Review Time

The TokenInsight index committee generally meets on the first Monday of each month to review the TIGPT index, and adjusts the sample tokens on the second Monday if needed.

6.2 Reference for Review

The reference for reviewing sample tokens on the first Monday of each month is generally based on trade data from the first Monday of the previous month to the day before the first Monday of the review month (new issues are subject to issue date).

6.3 Sample Adjustment

The percentage of each adjustment of index samples will not exceed 20%.

6.4 Buffer Principle

In order to effectively reduce the turnover rate of index sample tokens, the TIGPT index adopts the buffer rule during its periodic adjustment: new samples in the top 8 are given priority to be included in the index, and old samples in the top 12 are preferred to be retained.

6.5 List of Alternatives

The TIGPT index sets up a list of alternative tokens to deal with temporary adjustments that occur between periodic adjustments. For

details, see section 8 on *Alternative List of Component Tokens*.

7. Temporary Adjustment of Component Tokens

TokenInsight will make necessary adjustments to the TIGPT index when there are special events in component tokens that affect the representativeness and investment value of each index. These events include, but are not limited to: token splitting, delisting, etc.

In general, TokenInsight will publish a sample token adjustment list as early as possible before the adjustment.

7.1 Component token split

When component tokens are split, the original price can be calculated by using the current token price and the split ratio. Adjusted circulating market capitalization will be calculated in the light of original price and updates will occur in the index modification. When it comes to re-sampling and sorting, the split token will become involved with its corresponding daily average through circulating market capitalization.

7.2 Trade Suspension Policy

Exchanges might collectively suspend the trading of a given token in anticipation of a hard fork or for some other reason. For the purposes of calculating the index, it will be assumed that the last composite price remains unchanged until trading resumes.

If the suspension continues for more than 14 days or in the event of delisting from exchanges, then we will remove the token from the index during next rebalancing, and the vacancies will be filled by top-ranked tokens on the alternative list.

7.3 Security Issues of Component Tokens

- Persistent hacking attacks or other security concerns: component tokens with the problem will be removed from samples, and the vacancies will be filled by the top-ranked tokens on the alternative list.
- Its value goes to zero or its transactions are prohibited by law: component tokens with the problem will be removed from samples, and the vacancies will be filled by the top-ranked tokens on the alternative list.

7.4 Force Majeure

In cases of acts made by those of governmental authority, or due to war, riot, natural disaster, or other cause beyond the reasonable control of TokenInsight, the indexing will continue as usual unless it is technically impossible to perform.

8. Alternative List of Component Tokens

In order to improve predictability and transparency, the TIGPT index sets up a list of alternative component tokens to deal with temporary adjustments that occur between periodic adjustments.

- We will set up an alternative list when we regularly adjust samples. The number of tokens in the alternative list is generally 20% of the number of index samples, and the TIGPT index sets up two alternative component tokens.
- When a sample vacancy occurs for reasons such as delisting or other reasons, we will select the top-ranked tokens in the alternative list as index samples.

- When the number of tokens in the alternative list is more than half used, TokenInsight will update and announce a new list in a timely manner.

9. Index Maintenance

9.1 Index Committee

In order to standardize the operation of the index and use scientific and authoritative methods to compile the TIGPT index, TokenInsight has set up an index committee, which is composed of experts and well-known scholars in index compilation, index investment, market research on international levels.

- The Index Committee is responsible for assessing, advising and reviewing the compiling of the TIGPT Index, ensuring that scientific and authoritative methods are used; evaluating the qualifications of the index sample tokens to ensure that the requirements of the rules are met; and advising on other matters concerning the operation and development of the Index.
- In general, the TIGPT Index Committee shall meet regularly once a month or as required. Each meeting shall be attended by more than half of the experts. Decisions shall be made by a collective vote of the Committee and shall be valid only with the consent of more than two thirds of the experts present.
- The relevant resolutions of the Committee are issued on behalf of TokenInsight.
- The members of the Index Committee are appointed by TokenInsight and may, in principle, be renewed every two years. The Committee shall have a Chairman, who shall preside at the

meetings and shall form the resolutions of the meetings.

9.2 Secretary of the Index Committee

The index committee has a secretary who is responsible for connecting with members, preparing materials for meetings, chairing meetings and promoting the implementation of relevant resolutions.

9.3 TokenInsight Inc.

TokenInsight is responsible for the operation of the TIGPT Index; for the maintenance, management and servicing of the Index in accordance with the rules; and for the implementation of relevant resolutions of the Index Committee.

10. Revision and Supplement of Index Rules

Based on market changes and user feedbacks, when the index committee or TokenInsight becomes aware of the need to revise or supplement the index rules, it must be discussed and decided by the index committee.

- Any changes to the index rules must be discussed and decided through the index committee.
- When the conditions for a meeting are not met, a vote may be taken through communications, and any change in the rules may be approved only with the consent of at least two thirds of the members.
- Adjustments to index rules must be announced in advance.

11. Disclosure of Information

In order to guarantee the objectivity, neutrality, authority, transparency, openness and fairness of the index, TokenInsight has established a strict information disclosure system.

- Before any information is publicly disclosed, no one, including members of the index team and the index committee, may privately disclose it to the outside world or give private interviews to the media.
- The media for information disclosure includes, but is not limited to, the TokenInsight website and other strategic media partners.
- The results of periodic review of samples are generally announced 3 days in advance; adjustment plans for samples are announced as far in advance as possible; and major adjustments to index compilation and maintenance rules are generally announced 3 days in advance.

12. Index Release

12.1 Channels

The TIGPT Index is widely distributed in various forms at home and abroad.

- Real-time index release via TokenInsight website (tokenin.com);
- Instant global release via TokenInsight strategic media partners;
- Daily reports via strategic media partners.

12.2 Frequency

The TIGPT index is calculated and distributed in real time, the current calculated frequency is once per second, and the index quotes are updated every second.

13. Appendix: Explanation of Index Calculation

Assuming that we choose 3 general payment tokens as component tokens to calculate the index and use the adjusted circulating market capitalization of tokens on base day as base value. Basic point index is set to be 1000 points.

✓ Index under normal calculation (when no need for correction)

Base Day

Token	Market Price(USD)	Circulation	Circulating Market Capitalization	Adjusted Circulation	Adjusted Circulating Market Capitalization
A	80	2,000	160,000	2,000	160,000
B	5	5,000	25,000	5,000	25,000
C	0.3	10,000	3,000	10,000	3,000
Total					188,000

Calculation of Index

Total Adjusted Circulating Market Capitalization	Base Date	Base Point	TIGPT Index
(1)	(2)	(3)	(3)×(1)/(2)
188,000	188,000	1000	1000

The First Day

Token	Market Price(USD)	Circulation	Circulating Market Capitalization	Adjusted Circulation	Adjusted Circulating Market Capitalization
A	85	2,100	178,500	2,000	170,000
B	6	5,200	31,200	5,000	30,000

C	0.9	11,000	9,900	10,000	9,000
				Total	209,000

Calculation of Index

Total Adjusted Circulating Market Capitalization	Base Date	Base Point	TIGPT Index
(1)	(2)	(3)	(3)×(1)/(2)
209,000	188,000	1000	1111.70

✓ Adjustment of sample token:

Remove token C from sample and add token D to the sample.

Token	Market Price(USD)	Circulation	Circulating Market Capitalization	Adjusted Circulation	Adjusted Circulating Market Capitalization
A	85	2,100	178,500	2,100	178,500
B	6	5,200	31,200	5,200	31,200
D	2	8,000	16,000	8,000	16,000
				Total	225,700

Correction of Index

Adjusted Circulating Market Capitalization Prior to Modification	Adjusted Circulating Market Capitalization After Modification	Old Divisor	New Divisor
(1)	(2)	(3)	(3)×(2)/(1)
209,000	225,700	188,000	203,022.01

The Second Day

Token	Market Price(USD)	Circulation	Circulating Market Capitalization	Adjusted Circulation	Adjusted Circulating Market Capitalization
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A	90	2,200	198,000	2,100	189,000
B	7	5,400	37,800	5,200	36,400
D	1.5	8,200	12,300	8,000	12,000
				Total	237,400

Calculation of Index

Total Adjusted Circulating Market Capitalization	Base Date	Base Point	TIGPT Index
(1)	(2)	(3)	(3)×(1)/(2)
237,400	203,022.01	1000	1169.33

The Third Day

✓ Component token splits

One Token A split to one hundred Token E.

Token	Market Price(USD)	Circulation	Circulating Market Capitalization	Adjusted Circulation	Adjusted Circulating Market Capitalization
E	0.8	230,000	184,000	0	0
B	6	5,600	33,600	5,200	31,200
D	1.2	8,400	10,080	8,000	9,600

According to the market price of E, the market price A could be calculated. The market price of A=100 × the market price of E:

Token	Market Price(USD)	Circulation	Circulating Market Capitalization	Adjusted Circulation	Adjusted Circulating Market Capitalization
A	80	0	184,000	2,100	168,000
B	6	5,600	33,600	5,200	31,200

D	1.2	8,400	10,080	8,000	9,600
				Total	208,800

Calculation of Index

Total Adjusted Circulating Market Capitalization	Base Date	Base Point	TIGPT Index
(1)	(2)	(3)	(3)×(1)/(2)
208,800	203,022.01	1000	1028.46

Contact Information

For detailed information on the TIGPT Index, please contact
TokenInsight Inc..

Customer Service:

TokenInsight Inc.

Address: No.1 6th Floor, Building A

Tsinghua Science Park

Haidian District, Beijing 100083

E-mail: data@tokeninsight.com

Web: tokenin.com

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