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TokenInsight
Exchange Rating Methodology

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Design ideas

When choosing crypto exchanges, investors usually evaluate the exchange from multiple perspectives. The evaluation dimensions of investors can usually be divided into three categories, including the basic qualifications of the exchange, liquidity and risk.

• The basic qualifications of the exchange, including the team, duration, and compliance, are the prerequisites for determining whether the exchange is "trustworthy".

• Liquidity is an indicator to evaluate the adequacy of the exchange's scale, capacity and counter-party.

• Risk is an indicator to evaluate the safety of transactions.

Based on the above, TokenInsight comprehensively evaluates the overall strength of the exchange from the three aspects of the exchange's basic qualifications, liquidity, and risks, and assigns corresponding ratings based on the final score.

Formula and calculation method

Basic setting

In the crypto market, the three aspects of exchanges' basic qualifications, liquidity, and risks are independent of each other and do not affect each other. Each aspect is an independent factor of the exchange's rating.

The formula for calculating the comprehensive score of the exchange rating

$$Exchange\ Point = 25\,\%\,\beta_i + 25\,\%\,P_{f_i} + 50\,\%\,LS_{Ex_i} + Others$$

Including:

$Exchange\ Point$ represents the comprehensive score of the exchange.

β_i represents i exchange's risk score, which is used to measure the comprehensive risk degree of the exchange, with a full score of 100. The higher the score, the lower the risk.

LS_{Ex_i} ($Liquidity\_Score_{Exchange_i}$) represents the liquidity score of exchange i, with a full score of 100. The higher the score, the better the liquidity.

P_{f_i} indicates the basic qualification score of the i Exchange, which is composed of multiple evaluation dimensions such as team, compliance, and duration. The full score is 100 points, the higher the score, the better the basic qualifications of the exchange.

The weight of each score is shown in the formula. Each score is weighted and converted by weight, which is the final score. The rating is based on the final score (see below).

Parameter introduction and corresponding calculation formula

P_{f_i} (Risk-free basic qualification score, accounting for 25%)

Main components: **team, compliance, duration**. Some other factors may be added in the future.

The higher the risk-free basic qualification score, the higher the exchange's ranking in this category.

Calculation formula:

$$P_f = 40\,\%\,Team + 40\,\%\,Regulation + 20\,\%\,Duration$$

Team, accounting for 40%. Team evaluation dimensions include work experience (traditional finance/blockchain related industries), team stickiness, etc. The more experienced the team and the longer the cooperation time, the higher the score for this item.

Regulation, accounting for 40%. Regulation is scored based on the type of license and authority obtained by the exchange. The better the regulation status, the higher the score for this item.

Duration, accounting for 20%. The duration is assigned points based on the operating years of the exchange. The longer the operating duration, the higher the score for this item.

LS_{Ex_i} (Liquidity score, accounting for 50%)

The liquidity score of a single exchange is a collective formula that includes major influencing factors such as trading volume, open interest, and network traffic to evaluate the specific performance of the exchange in trading. For specific calculation methods, please refer to TokenInsight "*Methodology of Exchange Liquidity Score Calculation*".

After the liquidity score calculation is completed, TokenInsight will calculate the final liquidity score according to the different business coverage of the exchange.

- If the exchange only contains a single spot or derivatives business, its liquidity score is its main business liquidity score.

- If an exchange operates spot and derivatives business at the same time, its liquidity score is (spot liquidity score * 0.55 + derivatives liquidity score * 0.55).

The higher the liquidity score, the higher the exchange's ranking in this category.

β_i (Exchange risk score, accounting for 25%)

It is divided into three evaluation dimensions. The higher the total score, the lower the risk of the exchange and the higher the ranking:

- Real liquidity risk (accounting for 25%)

- Operational survival risk (0-1 variable, determines whether β is 0)

- Cer.live risk score (accounting for 75%)

Calculation formula:

$$\beta = Operation\ Risk\ (Real\ Liuqidity\ Risk + CSS)$$

Operation risk: "0-1" variable, as a multiplier of the other two variables.

Real Liquidity Risk, accounting for 25%, is based on past exchange transaction data to determine the score.

Cer.live Risk Score (CSS) is obtained from the cer.live website, with a full score of 10, accounting for 75%.

The CSS Score (Cybersecurity Score) comprehensively scores the security of the exchange from server security, user security, penetration testing, vulnerabilities, ISO 27001 and capital insurance. The higher the score, the higher the security of the exchange and the lower the security risk. For specific information, please refer to the relevant instructions on the cer.live website: https://cer.live/certified

Others (other possible influencing factors)

Other are factors that have not yet been classified but may affect the score of the exchange. The default value is 0.

Scores and Ratings

The rating and ranking of the exchange are determined by the points obtained. As the score changes, exchange ratings and rankings may change.

The correspondence between scores and ratings is as follows:

Above 75 points: AA rating.

60-75 points: A rating.

50-60 points: BBB rating.

40-50 points: BB rating.

30-40 points: B rating.

20-30 points: CCC rating.

15-20 points: CC rating.

10-15 points: C rating.

Below 10 points: D rating.

We openly accept any opinions or suggestions on this method.

You can contact us by sending an email to: research@tokeninsight.com.