



INDEX BAKERY

Index Methodology

Crypto Series

Version
1.1

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Version History

Any **Material Change** to the methodology will be documented and made transparent. The below table constitutes all such **Material Changes** starting from version 1.0 of this document.

Version	Effective Date (before Open)	Description
1.0	2026-04-01	First live version
1.1	2026-06-24	Change of Fixing Time to 2pm Europe/London

1. Introduction

This document (the “**Methodology**”) sets forth the rules, principles, and procedures governing the design, calculation, maintenance, and governance of the indices forming part of the Index Bakery Crypto Series (each an “Index”). It defines the framework under which Index Levels are determined and published and shall be read together with the applicable specifications and any supplementary documents referenced herein.

The Methodology is issued and maintained by **The Index Bakery (T.I.B. GmbH)**, which acts simultaneously as **Index Sponsor**, **Index Administrator**, and **Index Calculation Agent** for all indices within the Crypto Series.

In its capacity as **Index Sponsor**, The Index Bakery is responsible for the conception, economic design, and overall structure of each Index, including the definition of the Index Objective.

In its capacity as **Index Administrator**, The Index Bakery is responsible for the documentation, governance, oversight, and periodic review of this Methodology, as well as for ensuring that the Indices are administered in accordance with the rules set out herein.

In its capacity as **Index Calculation Agent**, The Index Bakery is responsible for the operational implementation of the Methodology, including the daily calculation and publication of Index Levels.

The Indices covered by this Methodology are published at **www.indexbakery.com** as well as under the respective Reuters Instrument Codes (“RICs”) specified in Section 3.1 (Specifications).

Any Material Change to the Methodology will be documented transparently in the Version History section of this document. The most recent version of this Methodology is publicly available at **www.indexbakery.com**.

The Methodology and the policies and procedures referenced herein describe the principles applied in determining the Index Levels. While The Index Bakery endeavours to ensure the accuracy, robustness, and integrity of all calculations, no guarantee or warranty is provided regarding the future performance or level of any Index at any particular time.

The publication of an Index does not constitute investment advice, a recommendation to invest, or an assurance regarding the suitability or performance of any financial instrument referencing an Index. The Indices are designed to serve as benchmarks reflecting the market performance of the relevant Underlying Assets in accordance with the rules set out in this Methodology.

2. Description

The **Index Bakery Crypto Series** was developed by **The Index Bakery (T.I.B. GmbH)** to deliver a robust, rules-driven, and transparent methodology for tracking the performance of both single digital assets and broader crypto asset baskets. The indices are purpose-built to support institutional benchmarking, act as underlying references for index-tracking investment products, and provide a reliable measure of market-level performance across time. **The Index Bakery** acts as the **Index Administrator** for all indices within this series.

2.1. Index Objective

The objective of the single coin **Reference Rate** indices is to provide an accurate, transparent, and representative daily reference rate for a single **Underlying Asset** or **Coin**. Each index is designed to reflect the prevailing market price of the asset by aggregating eligible spot-market transactions from vetted trading venues, applying rigorous data quality filters, and excluding anomalous or unrepresentative trades. The resulting reference rate serves as a robust benchmark for valuation, performance measurement, and index-linked investment products.

3. Specifications

3.1. Details

Name	RIC	ISIN	Base Date	Underlying Asset	Currency	Live Date
Index Bakery Bitcoin Reference Rate (USD)	.IBRBTCUS	tba	2025-01-01	BTC	USD	2026-04-01
Index Bakery Ethereum Reference Rate (USD)	.IBRETHUS	tba	2025-01-01	ETH	USD	2026-04-01
Index Bakery Ripple Reference Rate (USD)	.IBRXPUS	tba	2025-01-01	XRP	USD	2026-04-01
Index Bakery Solana Reference Rate (USD)	.IBRSOLUS	tba	2025-01-01	SOL	USD	2026-04-01
Index Bakery Cardano Reference Rate (USD)	.IBRADAUS	tba	2025-01-01	ADA	USD	2026-04-01
Index Bakery Stellar Reference Rate (USD)	.IBRXLMUS	tba	2025-01-01	XLM	USD	2026-04-01
Index Bakery Chainlink Reference Rate (USD)	.IBRLINKU	tba	2025-01-01	LINK	USD	2026-04-01
Index Bakery Bitcoin Cash Reference Rate (USD)	.IBRBCHUS	tba	2025-01-01	BCH	USD	2026-04-01
Index Bakery Avalanche Reference Rate (USD)	.IBRAVAXU	tba	2025-01-01	AVAX	USD	2026-04-01
Index Bakery Polygon Reference Rate (USD)	.IBRPOLUS	tba	2025-01-01	POL	USD	2026-04-01
Index Bakery Litecoin Reference Rate (USD)	.IBRLTCUS	tba	2025-01-01	LTC	USD	2026-04-01
Index Bakery Polkadot Reference Rate (USD)	.IBRDOTUS	tba	2025-01-01	DOT	USD	2026-04-01
Index Bakery Uniswap Reference Rate (USD)	.IBRUNIUS	tba	2025-01-01	UNI	USD	2026-04-01
Index Bakery Aave Reference Rate (USD)	.IBRAAVEU	tba	2025-01-01	AAVE	USD	2026-04-01
Index Bakery Algorand Reference Rate (USD)	.IBRALGOU	tba	2025-01-01	ALGO	USD	2026-04-01
Index Bakery Decentraland Reference Rate (USD)	.IBRMANAU	tba	2025-01-01	MANA	USD	2026-04-01
Index Bakery Tezos Reference Rate (USD)	.IBRXTZUS	tba	2025-01-01	XTZ	USD	2026-04-01
Index Bakery Chiliz Reference Rate (USD)	.IBRCHZUS	tba	2025-01-01	CHZ	USD	2026-04-01
Index Bakery Axie Infinity Reference Rate (USD)	.IBRAXSUS	tba	2025-01-01	AXS	USD	2026-04-01
Index Bakery Curve DAO Token Reference Rate (USD)	.IBRCRVUS	tba	2025-01-01	CRV	USD	2026-04-01
Index Bakery NEAR Protocol Reference Rate (USD)	.IBRNEARU	tba	2025-01-01	NEAR	USD	2026-04-01
Index Bakery Ondo Finance Reference Rate (USD)	.IBRONDOU	tba	2025-01-01	ONDO	USD	2026-04-01
Index Bakery Synthetix Reference Rate (USD)	.IBRSNXUS	tba	2025-01-01	SNX	USD	2026-04-01
Index Bakery Bittensor Reference Rate (USD)	.IBRTAOUS	tba	2025-01-01	TAO	USD	2026-08-04
Index Bakery Internet Computer Reference Rate (USD)	.IBRICPUS	tba	2025-01-01	ICP	USD	2026-08-04

Index Bakery Filecoin Reference Rate (USD)	.IBRFILUS	tba	2025-01-01	FIL	USD	2026-08-04
Index Bakery Arbitrum Reference Rate (USD)	.IBRARBUS	tba	2025-01-01	ARB	USD	2026-08-04
Index Bakery Aptos Reference Rate (USD)	.IBRAPTUS	tba	2025-01-01	APT	USD	2026-08-04
Index Bakery Cosmos Reference Rate (USD)	.IBRATOMU	tba	2025-01-01	ATOM	USD	2026-08-04
Index Bakery Hedera Reference Rate (USD)	.IBRHBARU	tba	2025-01-01	HBAR	USD	2026-08-04
Index Bakery Sui Reference Rate (USD)	.IBRSUIUS	tba	2025-01-01	SUI	USD	2026-08-04
Index Bakery Dash Reference Rate (USD)	.IBRDASHU	tba	2025-01-01	DASH	USD	2026-09-14
Index Bakery TRON Reference Rate (USD)	.IBRTRXUS	tba	2025-01-01	TRX	USD	2026-09-14
Index Bakery Hyperliquid Reference Rate (USD)	.IBRHYPEU	tba	2025-01-01	HYPE	USD	2026-09-14
Index Bakery Dogecoin Reference Rate (USD)	.IBRDOGEU	tba	2025-01-01	DOGE	USD	2026-09-14
Index Bakery Zcash Reference Rate (USD)	.IBRZECUS	tba	2025-01-01	ZEC	USD	2026-09-14

- All indices specified above are Total Return indices.
- All indices are published once a day with a target same-day publication time of around **14:30 Europe/London**.
- All indices are administered by **The Index Bakery**

3.2. Naming Convention

Each **Reference Rate** identifier consists of:

- **Index Bakery Prefix** (i.e. **IB**).
- **Methodology code** (e.g., **R** for **Reference Rate**).
- **Underlying Asset** code (e.g. **BTC**)
- **Currency code** (e.g., **US** or **U** for **USD**).

4. Calculation

4.1. Index

The index is calculated every day from Monday to Sunday. For any **Index Calculation Day** t , the **Index Level** is defined to be:

$$IL_t = \sum_{i=1}^n \frac{u_{i,t} * p_{i,t}}{D_t}$$

With:

- $u_{i,t}$ being the units of the **Underlying Asset** i as of date t .
- $p_{i,t}$ being the **Asset Price** of the **Underlying Asset** i as specified in section 4.2.
- D_t being the divisor as of date t .

For **Reference Rate** indices these are defined to be:

- $n = 1$ as there is only one **Coin** as the **Underlying Asset** each.
- $u_{i,t} = 1,000,000$ for any **Underlying Asset** i and **Index Calculation Day** t as there are no unit-affecting events such as rebalancings.
- $D_t = 1,000,000$ for any **Index Calculation Day** t as there is no default treatment for any event type affecting the divisor.

Note: While n , $u_{i,t}$, and D_t are fixed over time by default, they might still change as a result of an **Index Committee** decision, if it would be required to maintain compliance to the **Index Objective** as defined in section 2.1.

4.2. Asset Pricing

For calculating the Asset Price $p_{i,t}$ for any **Underlying Asset** i and **Index Calculation Day** t we apply a rigorous mechanism which aims to produce a representative figure representing a fair value of the **Underlying Asset** as of the specified date t . Key considerations for doing so are market size, liquidity, and trading transparency ensure that each price accurately reflects the underlying economic reality.

4.2.1. Trading Venue Eligibility Requirements

An asset may only draw trading volume from eligible venues. Venues must satisfy all requirements:

Market Integrity Standards

- Venue must maintain real-time order book data available to data providers.
- Venue must maintain 24/7 operational status (minimum 99.0% uptime monthly; 99.9% during UTC business hours).
- Venue must implement market abuse surveillance systems and publish quarterly abuse reports.
- Venue must maintain written anti-manipulation policies and enforcement procedures.
- Venue must not be subject to regulatory enforcement actions relating to market integrity within previous 24 months.

Operational Standards

- Venue must maintain insurance coverage for customer assets (minimum coverage 100% customer deposits).
- Venue must segregate customer assets according to applicable jurisdictional requirements.
- Venue must maintain independent audit attestation of financial controls (SOC2 Type II minimum; annual frequency).
- Venue must maintain cybersecurity insurance with minimum \$50 million coverage.

Data Availability

- Venue must provide real-time trade data (maximum 5-second latency) to multiple independent data providers.
- Venue must publish order book snapshots at defined frequencies (1-second maximum interval).
- Venue must make historical data available for minimum 24 months.
- Venue must maintain data consistency verification procedures.

Custody Integration

- Venue must integrate with institutional custody providers meeting defined standards.
- Venue must document settlement procedures and finality guarantees.
- Venue must maintain business continuity procedures with maximum 4-hour recovery time objective.

Size Requirements

- Venue must account for minimum 1.0% of combined trailing 30-day dollar trading volume across all eligible venues for each asset.
- Venue must not be owned or controlled by asset issuer or foundation (unless through transparent governance mechanism).

4.2.2. Price Data Hierarchy

Price determination follows a structured hierarchy that governs the prioritization of data sources used in index calculations:

Tier 1 – Reference Rates

Primary source consisting of institutional-grade daily rates calculated using validated methodologies.

Tier 2 – Exchange Last Trade

Used when a reference rate is unavailable. The final trade price is taken from the primary venue within a defined time window.

Tier 3 – Previously Available Price

If no Tier 2 data exist, the most recent verified price is carried forward.

Tier 4 – Committee Determination

In exceptional circumstances (e.g., market closures), the **Index Committee** determines an appropriate price within one business day.

4.2.3. Reference Rate Standards

All reference rates meet stringent institutional quality and governance standards.

Selection Criteria

- Based on validated transactions across multiple eligible venues.
- Employ median aggregation to ensure robustness against anomalies and manipulation.
- Support intraday calculation (minimum hourly frequency) and daily fixings at **14:00 Europe/London**.
- Provide methodological variants such as intraday, time-weighted average (TWAP), and fixed-time fixings.
- Undergo independent audits and regulatory compliance reviews.
- Accompanied by full calculation documentation for reproducibility and transparency.

4.2.4. Daily Pricing Process

The result of the below pricing process defines $p_{i,t}$ for any **Underlying Asset i** and **Index Calculation Day t** .

Fixing Time: 14:00 Europe/London on each **Index Calculation Day t** .

For Index Calculation Days prior to 2026-06-24, the fixing time was 14:00 CET.

Alternative fixing times may be defined for certain **Index** variants.

Unless expressly stated otherwise, all times in this methodology are stated in Europe/London time. Historical observations prior to 2026-06-24 were made in CET for indices with a **Live Date** before 2026-06-24.

Calculation Procedure

1. Data Collection (13:50–14:00)

- 1.1. Retrieve validated trade data for **Underlying Asset i** from all eligible venues covering the 13:50–14:00 time window as of t .

2. Validation (14:00–14:15)

- 2.1. Apply outlier detection to exclude trades deviating more than two standard deviations from the median.
- 2.2. Monitor for manipulation indicators such as venue concentration or abnormal spreads.
- 2.3. Flag unexplained deviations exceeding 10% versus prior levels and trigger backup rate sources if required.

3. Primary Price Determination (14:15–14:25)

- 3.1. Use **Tier 1** reference rate as the default input.
- 3.2. If unavailable, escalate sequentially to **Tier 2**, **Tier 3**, or **Tier 4** as required.
- 3.3. Determine the market snapshots $s_{i,1}, \dots, s_{i,5}$ for the five equidistant timestamps at 13:52, 13:54, 13:56, 13:58, and 14:00.
- 3.4. Calculate $p_{i,t}$ as the average of the five determined snapshots $s_{i,k}$ for $k = 1 \dots 5$:

$$p_{i,t} = \frac{1}{5} \sum_{k=1}^5 s_{i,k}$$

- 3.5. Document all data sources within the daily calculation report.

4. Quality Control (14:25–14:30)

- 4.1. Run return sanity checks and outlier analyses to detect abnormal performance.

4.2. Escalate irregularities to the **Index Committee** if detected.

4.2.5. Reference Rate Structure

Each reference rate is defined by three key attributes:

- Trading pair – base and quote currency.
- Structure – plain or composite.
- Frequency – intraday, hourly, or daily.

The **plain structure** uses a single trading pair, while **composite structures** aggregate multiple trading pairs converted into a common quote currency before benchmark computation.

4.2.6. Reference Rate Frequencies

Intraday: *Not applicable*

Hourly: *Not applicable*

Daily: Used for settlement and ETP valuation.

4.2.7. Calculation Process Summary

Data Source: Validated trade data from eligible exchanges.

Aggregation: Hierarchical aggregation by exchange, then by time period.

Validation: Outlier detection ensures resilience against manipulation and data anomalies.

4.3. Event Treatment

To correctly reflect the market reality for investors of any **Index Bakery Crypto Series** index we consider the following range of market events.

4.3.1. Hard Forks

Hard Forks occur when a blockchain network diverges into two separate chains due to differing consensus rules. In such events, holders of the original asset may receive newly created “forked” assets. When a hard fork takes place, the **Index Committee** evaluates which chain constitutes the continuing **Underlying Asset** and which represents the new fork. This determination considers multiple factors, including comparative market capitalization.

Because claiming forked assets requires discretionary action by holders and introduces operational and security risks, the Index Bakery Crypto Indices do not incorporate the value of forked assets into index calculations.

4.3.2. Emissions

Emissions are recurring protocol-generated awards granted to holders of certain **Crypto Assets**, often in the form of network **Gas** or similar units required to facilitate on-chain transactions. While emissions are native to specific blockchain designs, the aggregate daily economic value of these distributions has, to date, remained insignificant.

Incorporating emissions into index levels would create undue operational complexity for funds tracking the indices of the **Index Bakery Crypto Series**, particularly those subject to ongoing capital flows. Accordingly, emissions are excluded from index calculations.

4.3.3. Airdrops

An **Airdrop** is a discretionary distribution in which a newly issued crypto asset is allocated to holders of an existing asset. Airdrops are extrinsic to the underlying return drivers of the asset from which they originate and typically require active participation by holders to claim. The claiming process may also introduce operational, technical, or security risks.

Given these characteristics, the indices of the **Index Bakery Crypto Series** exclude the economic impact of airdrops from index calculations.

4.3.4. Staking Rewards

Staking rewards are earned when holders lock up their crypto assets as collateral to support network validation or other protocol operations. Earning these rewards requires affirmative action by the holder and introduces liquidity constraints, as staked assets are typically inaccessible for a defined period.

Given these characteristics, the indices of the **Index Bakery Crypto Series** do **not** reflect the value of staking rewards in index calculations.

4.3.5. Other

For any event relevant to the integrity, continuity, or proper functioning of the index that is not explicitly addressed in this document, the Index Committee will determine the market-appropriate treatment to ensure full compliance with the **Index Objective** as defined in Section 2.1.

5. Definitions

Airdrop – A discretionary distribution in which a newly issued crypto asset is allocated to holders of an existing **Crypto Asset**.

Assessor – An employee of an administrator of a commodity benchmark, or any other natural person whose services are placed at the administrator's disposal or under the control of the administrator, and who is responsible for applying a methodology or judgement to input data and other information to reach a conclusive assessment about the price of a certain commodity.

Benchmark – Any index by reference to which the amount payable under a financial instrument or a financial contract, or the value of a financial instrument, is determined, or an index that is used to measure the performance of an investment fund with the purpose of tracking the return of such index or of defining the asset allocation of a portfolio or of computing the performance fees.

Coin – A Crypto Asset that operates natively on its own blockchain, functioning as the primary unit of value used for transaction fees, network incentives, or as a medium of exchange within that blockchain ecosystem.

Contribution of Input Data – Means providing any input data not readily available to an administrator, or to another person for the purposes of passing to an administrator, that is required in connection with the determination of a benchmark, and is provided for that purpose.

Contributor – A natural or legal person contributing input data.

Crypto Asset – A digital asset recorded on a blockchain and secured through cryptographic techniques.

Emission – The ongoing creation of new units of a **Crypto Asset** according to the protocol's predefined supply schedule.

Expert Judgement – The exercise of discretion by an administrator or a contributor with respect to the use of data in determining a benchmark, including extrapolating values from prior or related transactions, adjusting values for factors that might influence the quality of data such as market events or impairment of a buyer or seller's credit quality, and weighting firm bids or offers greater than a particular concluded transaction.

Family of Benchmarks – Means a group of benchmarks provided by the same administrator and determined from input data of the same nature which provides specific measure of the same or similar market or economic reality.

Gas – The transaction fee required to execute operations on a blockchain network.

Hard Fork – A permanent change to a blockchain protocol that results in two distinct chains from a shared history.

Index – Any figure that

- a) is published or made available to the public;
- b) is regularly determined:
 - i. entirely or partially by the application of a formula or any other method of calculation, or by an assessment; and
 - ii. on the basis of the value of one or more underlying assets or prices, including estimated prices, actual or estimated interest rates, quotes and committed quotes, or other values or surveys.

Index Administrator – The natural or legal person that has control over the provision of a benchmark and in particular administers the arrangements for determining the benchmark, collects and analyses the input data, determines the benchmark and publishes it.

Index Calculation Day – Any day from Monday to Sunday.

Index Committee – The body responsible for overseeing, interpreting and updating the rules governing the Index.

Index Objective – The goal of the index it aims to achieve as specified in section 2.1.

Index Provider – A natural or legal person that has control over the provision of an index.

Live Date – The date specified in section 3.1 from which the **Index** is calculated and published on an ongoing live basis.

Material Change – Any modification to the methodology that (i) alters the conceptual framework or calculation approach of the index, or (ii) leads to Index Levels that differ from those that would have been produced under the previous methodology, either historically or prospectively.

Staking Reward – Additional units of a crypto asset granted to participants who contribute to a network's consensus or validation process.

Use of Benchmark – Means:

- a) Issuance of a financial instrument which references an index or a combination of indices.
- b) Determination of the amount payable under a financial instrument or a financial contract by referencing an index or a combination of indices.
- c) Being a party to a financial contract which references an index or a combination of indices.
- d) Providing a borrowing rate as defined in point (j) of Article 3 of Directive 2008/48/EC calculated as a spread or mark-up over an index or a combination of indices and that is solely used as a reference in a financial contract to which the creditor is a party.
- e) Measuring the performance of an investment fund through an index or a combination of indices for the purpose of tracking the return of such index or combination of indices, of defining the asset allocation of a portfolio, or of computing the performance fees.

Underlying Asset – The underlying as specified in Section 3.1.

6. Governance

6.1. Index Committee

The **Index Bakery Index Committee** is responsible for the oversight, governance, and ongoing maintenance of all indices administered by **The Index Bakery**. Its remit includes reviewing and updating index policies, including rules governing the selection and eligibility of digital assets, as well as other methodological matters.

All discussions, deliberations, and materials of the **Index Committee** are confidential, as information relating to index changes may be market-sensitive.

The **Committee** retains full discretion to make exceptions to the published methodology when deemed necessary. Where a deviation from the general rules set out in this document or in any supplementary materials occurs, clients will be notified whenever reasonably practicable.

The **Committee** may exercise judgment in circumstances where strict application of the methodology could result in unnecessary turnover, excessive index changes, or potential market disruption. It may also elect to suspend or discontinue index publication, or to remove a digital asset, if the asset becomes subject to legal, regulatory, or operational concerns—including, for example, potential classification as an unregistered security, allegations of market manipulation, sanctions exposure, privacy features that raise compliance risks, or security incidents such as hacks.

In addition to ongoing oversight, the **Committee** conducts a formal review of each index methodology at least annually to confirm alignment with the stated index objectives and to ensure the continued appropriateness of data sources and rules. Where relevant, **The Index Bakery** may launch a public consultation to solicit feedback from external stakeholders.

6.2. Trade Suspensions and Market Distortions

Certain circumstances may necessitate extraordinary adjustments to the **Index Bakery Crypto Series** indices. These circumstances include, but are not limited to, the following:

Extended or recurring outages at a Crypto Exchange or trading venue.

Misconduct or operational irregularities involving a Crypto Exchange or a specific Crypto Asset.

Material declines in trading activity, whether affecting individual Crypto Assets, specific Exchanges or trading venues, or broader segments of the Crypto market.

Implementation of investment or trading restrictions applicable to international investors in certain jurisdictions or on certain Exchanges.

Permanent or prolonged cessation of trading in a Crypto Asset.

Technological failures that impair normal market functioning or data availability.

In such instances, the **Index Administrator** will generally rely on the most recent reliable data. In exceptional cases, deviations from the standard rules outlined in this methodology may be required. Examples include adjustments to the timing of scheduled Index Reviews or other measures deemed necessary to preserve the integrity, accuracy, and continuity of the Index.

Contact

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