Kaiko Indices

Kaiko Benchmark Indices

Rulebook

April 2025

Version 2.0

www.kaiko.com/indices

About Kaiko Indices

Kaiko Indices offers institutional-grade benchmarks and indices, setting the standard for reliability and transparency in the digital asset market. As a regulated Benchmark Administrator under the EU BMR framework and compliant with IOSCO principles, we empower exchanges, asset managers, and financial institutions with trusted data solutions that support robust settlement and risk management practices.

Version History

Version	Publication Date	Comments
1.0.0	25/07/2023	Created
1.1.0	01/10/2024	New section: Kaiko Sector Indices Update: Kaiko Blue-Chip Indices (ISIN code) Update: Other minor edits
1.1.1	17/01/2025	Update: Kaiko Sector Indices (Description, list of index)
2.0.0	15/04/2025	Document structure changes with new index families. Update: Kaiko Market Indices

Table of contents

1. Introduction

Over the past decade, the cryptocurrency market has grown exponentially, attracting a diverse range of investors seeking innovative opportunities beyond traditional financial instruments. In this rapidly evolving digital asset landscape, Kaiko has established itself as a pioneer, providing comprehensive cryptocurrency data—from trades on centralized and decentralized exchanges to advanced analytical metrics.

As digital assets mature into a recognized and investable asset class, the demand for reliable, rules-based, and transparent benchmarks has become essential. Investors increasingly seek comprehensive market coverage and a structured segmentation framework to better understand and capitalize on market trends.

Kaiko Indices offers a robust framework for measuring and tracking the performance of the digital asset market, leveraging institutional-grade methodologies for index construction. Designed to meet the evolving needs of investors, Kaiko Indices ensures broad market coverage, precise classification, and a transparent governance structure.

Kaiko Indices' approach to index design is built on four fundamental principles:

Transparency

Kaiko Indices is committed to maintaining a clear and objective methodology, ensuring market participants have full visibility into index construction, data sources, and governance. Our methodologies are publicly available, allowing investors to understand the calculation processes and ensure alignment with industry best practices.

Investability

Kaiko Indices products are designed to be investable and replicable, enabling the creation of financial products that accurately reflect market trends. Through a rigorous asset vetting process incorporating liquidity and size filters, our indices ensure that constituents are both representative of the market and readily accessible for trading.

Innovation

Kaiko Indices continuously innovates by expanding its offerings and integrating cutting-edge methodologies to ensure its indices remain robust, relevant, and aligned with market trends. The Kaiko Indices product suite remains dynamic and forward-thinking, empowering investors to capitalize on the latest opportunities in the digital asset ecosystem.

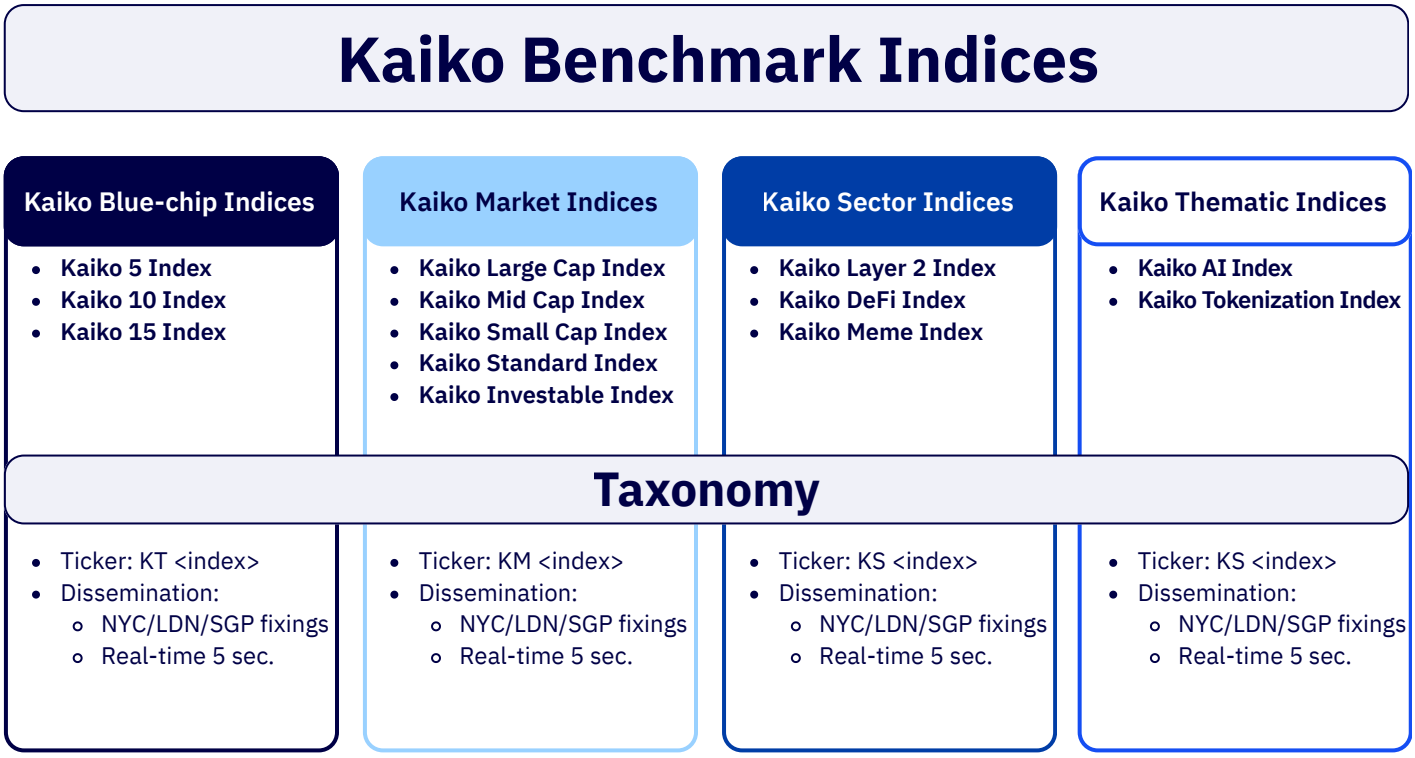
Governance

Kaiko Indices adheres to a robust governance framework, with periodic methodology reviews, structured oversight, and predefined processes to ensure index integrity. All indices undergo regular maintenance and rebalancing to reflect market conditions while maintaining stability and consistency over time.

This document outlines the principles, policies, and procedures governing the construction and maintenance of Kaiko Indices. It provides a detailed framework for index methodology, including asset selection, weighting criteria, calculation methodologies, and governance processes. Unless explicitly stated otherwise, these guidelines apply to all indices within the Kaiko Investable Universe.

2. Indices Taxonomy

Kaiko Benchmark Indices are organized according to a comprehensive taxonomy proposing a framework to extract common properties or aspects from the digital asset universe and to derive them into clearly defined index families. This taxonomy serves as the foundation for index classification and ensures that each index is constructed to represent a distinct aspect of the market, whether by size, sector, or thematic relevance. The principal index families include Blue-Chip Indices, Market Indices, Sector Indices, and Thematic Indices. Each family is governed by specific rules for asset selection, weighting, and rebalancing, reflecting its unique characteristics and investment objectives.



The taxonomy is designed to provide transparent and complementary coverage of the digital asset market. For example, Blue-Chip Indices focus on the most liquid and largest assets, while Market Indices offer a broad segmentation by market capitalization and liquidity tiers (such as Large, Mid, and Small Cap). Sector Indices capture performance within key industry verticals like Decentralized Finance (DeFi) or blockchain infrastructure, and Thematic Indices offer targeted exposure to emerging trends such as artificial intelligence or tokenization. This structured approach facilitates informed asset allocation and benchmarking, supporting a wide range of investment strategies and regulatory requirements. The taxonomy is continuously reviewed and expanded to remain aligned with market developments, ensuring the indices remain robust, relevant, and representative of the digital asset ecosystem.

3. Data Sources

3.1. Market Data

3.1.1. Price & Liquidity Metrics

1. Data Provider: Kaiko

Founded in 2014, Kaiko is the leading provider of cryptocurrency market data, analytics, and indices, offering businesses institutional-grade, regulatory-compliant solutions. Kaiko empowers market participants with global connectivity to real-time and historical data feeds across the world's leading exchanges.

2. Coverage

Kaiko covers more than a hundred digital assets exchanges and 10,000 pairs globally. It operates an institutional grade technical stack with storage and collection run on redundant, geographically dispersed servers. Kaiko's unbiased data is used for trading, research, valuation and/or display purposes, with major market participants.

3. Kaiko Benchmark Reference Rates & Kaiko Reference Rates

Kaiko Indices will use the suite of Benchmark Reference Rates and Reference Rates for the purposes of calculating the Indices. Designed to bring greater transparency to pricing, these are rules-based and independent rates established from executed trades from centralised exchanges. Each Reference Rate is calculated real-time (every 5 seconds), as well as being published as a daily fixing covering three different time zones: London 16:00 UTC, Singapore 08:00 UTC, New York 20:00 UTC. For more detailed information, please refer to section 4.1.1.

4. Liquidity Metrics

For the purpose of index construction, liquidity data such as volume, spread or market depth metrics are computed on the basis of data collected and provided by Kaiko.

3. Data Sources

3.2. Supply Data

3.2.1. Kaiko Indices Research

Accurately determining the total supply and circulating supply of digital assets presents a significant challenge due to the diverse structures of blockchain protocols and tokenomic models. These complexities impact research methodologies and the use of supply data in financial applications.

To ensure the accuracy and tradability of its indices, Kaiko Indices has developed a proprietary methodology for measuring coin supply. This model currently covers assets representing over 95% of the total market capitalization of digital assets, with coverage expanding on a quarterly basis. By leveraging this approach, Kaiko Indices provides a more precise and reliable representation of digital asset supply, enhancing the robustness of index construction and calculation.

Total Supply

Total Supply represents the aggregate number of tokens that have been issued and are currently recorded on the public ledger. It does not account for future issuances until they become visible on-chain. This measure includes all long-term strategic and insider holdings, as well as tokens held by network participants, including those considered lost or inaccessible.

Circulating Supply

Circulating Supply refers to the portion of Total Supply that is readily available for trading and contributes to market liquidity in the short to medium term. This measure applies a restrictive approach, including only tokens that can become liquid almost immediately. The following categories of tokens are excluded from Circulating Supply:

- Foundation tokens held or controlled by a centralized or decentralized entity
- Staked tokens used for governance participation without a lock-up period
- Tokens deemed lost due to inaccessible private keys
- Forked tokens that have never been activated on the forked chain
- Tokens allocated to founders and employees
- Tokens issued to seed, private, and public investors
- Tokens locked as part of Proof-of-Stake delegation for a fixed period
- Tokens locked in governance mechanisms for a fixed period
- Tokens subject to legally binding agreements restricting their sale until specified date

3.2.2. External Sources

For assets not yet covered by Kaiko Indices' proprietary research, supply data is sourced from pre-approved external platforms. A review process is initiated if discrepancies between data sources exceed an acceptable tolerance threshold, ensuring the accuracy and reliability of the reported figures.

4. Index Construction

4.1. Index Underlying Components

4.1.1. Rates Methodology

Kaiko Indices calculates its indices using prices derived from its suite of Reference Rates and Benchmark Reference Rates. These rates serve as the underlying components, and their prices are incorporated into the computation of the Index Value. To ensure accuracy and reliability, a rigorous exchange selection process and a robust price aggregation methodology are applied, as outlined in the Reference Rates methodology:

Exchange Due Diligence

All centralized exchanges are thoroughly evaluated, and only those that meet rigorous reliability and transparency standards are included in the hard-vetted exchange list. This list is reviewed on a quarterly basis, with exchanges categorized into two tiers based on their compliance with predefined vetting criteria. The composition of Benchmark Reference Rates is derived from the hard-vetted exchanges, ensuring adherence to strict reliability and transparency standards. In contrast, Reference Rates incorporate data from exchanges that meet fundamental eligibility criteria, providing a broader yet systematically screened dataset.

Criteria	Basic Vetting	Hard Vetting
Absent from any sanction list	Yes	Yes
Located in stable and open country	–	Yes
Has been operating for the past	–	5 Years
Regulated by an independent government body	–	Yes
KYC/AML controls	–	Strong
Trading Policies	–	Significant
Offers REST API & WebSocket data feeds	–	Yes
Offers live & historical trade data	–	Yes
Provide cold storage for customers funds	–	Yes

Liquidity Optimization

From the curated exchange list, an optimization process selects the most relevant exchanges to maximize liquidity and offer accurate price discovery.

Robust Aggregation Method

A Volume-Weighted Median combined with a Time-Weighted Average Price (TWAP) methodology is applied to derive fair and representative prices based on executed transactions from the selected exchanges.

Quarterly Reviews

The exchange constituents and calculation window of the Reference Rates are reviewed quarterly to ensure alignment with prevailing market conditions.

Buffering Rules

For Benchmark Reference Rates, buffering mechanisms are implemented to minimize unnecessary parameters turnover during rebalancing, thereby maximizing liquidity coverage and maintaining methodological consistency.

4. Index Construction

4.1. Index Underlying Components

4.1.2. Requirements

The primary objective of Kaiko's Digital Asset Vetting (KDAV) is to safeguard Kaiko Indices products from avoidable asset risks and ensure accurate tracking of the strategy's performance. It evaluates the quality and index suitability of all digital assets in the Digital Asset Universe covered by Kaiko.

The Digital Asset Universe consists of thousands of digital assets, each with unique characteristics and risks profiles. The KDAV eligibility framework applies a multi-tier vetting process to assess asset quality and ensure suitability for index inclusion. Digital assets classified as Asset-Referenced Tokens (ARTs) or Electronic Money Tokens (EMTs), as defined by the European Banking Authority (EBA), are excluded from it.

Asset Vetting 1

Kaiko Digital Asset Universe covers more than +2,300 spot digital assets currently traded on approximately 70 exchanges. All assets are screened for the following:

- Asset type - excluded from the universe any asset whose value is derived from another asset. Notable examples: stablecoins, tokenized share, tokenized ETFs, short or leverage coins
- CEX Coverage - excluded from the universe any asset trading only on Decentralized platforms
- Data availability - excluded from the universe any asset whose tokenomics metrics are not available Total supply, Circulating supply, etc..)
- Trading history - excluded from the universe any asset with less than 90 days history on at least one of the centralized exchanges covered by Kaiko

All remaining assets are composing the Kaiko Benchmark Universe

Asset Vetting 2

All assets from the Kaiko Benchmark Universe are screened for the following:

- Tradability - excluded from the universe, all assets not traded on at least two hard-vetted exchanges
- Liquidity - excluded from the universe, all assets whose:
- Percentage of the rolling 90-day Average Daily Trading Volume ($ADTV_{90}$) is below 0.01% of the Total Market ADTV on soft-vetted exchanges.
- Percentage of the rolling 90-day Average Daily Circulating Market Capitalization ($ADCMC_{90}$) is below 0.01% of the Total Market ADCMC.

All remaining assets are composing the Kaiko Investable Universe

4. Index Construction

4.2. Index Methodology - General Framework

4.2.1. Asset Selection

Asset selection is conducted within the Kaiko Investable Universe, ensuring that all assets considered for inclusion meet minimum liquidity and market capitalization requirements. The selection process is designed to systematically identify assets that best represent the underlying market segment while maintaining index stability and mitigating excessive turnover.

Ranking Methodology

All eligible assets within the Kaiko Investable Universe are ranked in descending order based on a composite score that combines measures of size and liquidity:

All assets from the Kaiko Investable Universe are ranked in descending order in terms of:

$$AvgRank = w_1 \times SizeRank + w_2 \times LiquidityRank$$

Size Rank: The rank of each asset based on its 90-day average circulating market capitalization, sorted in descending order.

Liquidity Rank: The rank of each asset based on its 90-day average daily trading volume, sorted in descending order.

Weights (w): Weighting factors that determine the relative importance of size and liquidity in the selection process.

The relative weight of size and liquidity varies depending on the index family, reflecting the specific market focus of each index. Such rank can be complemented by additional metrics to enrich the asset selection process and better reflect the underlying market segment.

Buffering

To enhance index stability and reduce unnecessary turnover, the selection process incorporates buffer rules. Buffer thresholds ensure that existing constituents remain in the index unless they fall significantly below newly ranked candidates, thereby minimizing excessive rebalancing. For more information on existing buffer rules refer to Appendix 1.

4.2.2. Dual Weighting Scheme

The Kaiko Indices methodology applies a dual-weighting framework that incorporates both market capitalization and liquidity to enhance the representativeness and investability of the index. While market capitalization provides a measure of an asset's relative size within the market, liquidity ensures that the index constituents are sufficiently tradable to support replication and efficient execution.

By integrating these two dimensions, the weighting approach balances exposure to the largest digital assets with the need for investability, thereby improving the index's suitability for institutional adoption. Weightings are reviewed and adjusted in accordance with the rebalancing schedule outlined in the Review section of this document.

Circulating Market Capitalization

Circulating Market Capitalisation Weights are calculated as the 90-day Average Daily Circulating Market Capitalization for each underlying component in the index composition over the 90-day Total Circulating Market Capitalization of the index at time t.

4. Index Construction

4.2. Index Methodology - General Framework

4.2.2. Dual Weighting Scheme

Weighting

$$w(CircMktCap)_t^i = \frac{(ADCMC_{90})_t^i}{\sum_{k=1}^{n}(ADCMC_{90})_t^k}$$

Liquidity Weighting

Liquidity Weights are calculated as the 90-days Average Daily Trading Volume or each underlying component in the index composition over the 90-days Total Average Daily Trading Volume of the index at time t.

$$w(ADTV)_t^i = \frac{(ADTV_{90})_t^i}{\sum_{k=1}^{n}(ADTV_{90})_t^k}$$

Weighting Formula

The final weighting factor wf_t^i applied to the asset i at time t is defined as follows:

$$wf_t^i = w_1 w(CircMktCap)_t^i + w_2 w(ADTV)_t^i$$

4.2.3. Capping

A capping factor is applied to the weight of each individual digital asset (i) included in the composition of the index at time (t). It ensures that no single digital asset dominates the performance of the index and guarantees a minimum level of diversification in the composition. The capping threshold CT, expressed as a percentage, sets a weight limit on each individual digital asset contribution to the overall value of the index.

The following rule must apply at each rebalancing date: $wf_t^i \leq CT$

The relevant capping factor cf_t^i is applied to the constituent with uncapped weightings above the threshold CT. The excess weighting is allocated proportionally to the rest of the underlying constituents. The process is repeated iteratively until no weighting of any underlying constituents exceeds the capping threshold CT.

4.2.4. Rebalancing Schedule

Kaiko Indices undertakes regular index reviews of the underlying constituents of the Kaiko Index Family according to the frequency stated on individual index methodology and following the standards defined in the rebalancing calendar.

5. Indices Calculation

5.1. Step-by-Step Calculation Methodology

The calculation of Kaiko Indices follows a systematic, rules-based approach to ensure consistency, transparency, and accuracy. The process is structured around 3 phases: Index Initiation, Ongoing Publications, and Rebalancing Events.

Index Initiation (t=0)

At the index launch, the following steps are performed:

- Definition of a base Index value $Index_0$ (eg. 100).
- Collection of each asset price p_0^i included in the basket from its respective benchmark rate.
- Computation of the weighting factor wf_0^i for each asset included in the basket. Each asset is then subject to potential adjustments such as a capping factor cf_0^i or an exchange rate x_0^i.
- Aggregation of all asset weighting units to obtain the initial total index units TU_0.
- Calculation of the initial divisor value D_0 as the division of the initial total index units TU_0 by the Index value $Index_0$.

Ongoing Index Publications (t)

On each publication, the following steps are executed:

- Collection of each asset price p_t^i included in the basket from their respective benchmark rate.
- Aggregation of all asset weighting units to obtain the total index units TU_t.
- Calculation of the Index value $Index_t$.

Rebalancing Date (T+1)

On a scheduled rebalancing date, the following adjustments are made:

- Computation of the new weighting factor wf_{T+1}^i for each asset included in the basket. Each asset is then subject to potential adjustments such as a capping factor cf_{T+1}^i or an exchange rate x_{T+1}^i.
- Aggregation of all asset weighting units to obtain the new total index units TU_{T+1}.
- Computation of the difference ΔTU_{T+1} between the previous closing total index units of the index TU_T and the new total index units TU_{T+1}.
- Calculation of the new divisor D_{T+1}.

5. Indices Calculation

5.2. Divisor Calculation

5.2.1. Inputs

Symbol	Name	Description
T	**Events**	The timestamp at which the divisor is calculated.
n	**Number of Assets**	The number of assets in the index
p_T^i	**Asset price**	Price of the ith asset at time T
wf_T^i	**Weighting Factor**	Weighting factor applied to the ith asset at time T
cf_T^i	**Cap Factor**	Weighting cap factor applied to the ith asset at time T
x_T^i	**Exchange Rate**	Exchange rate applied to the ith asset at time T
ΔTU_{T+1}	**Total Units Delta**	Difference between the closing total index units of the index and the new total index units of the index at time T+1
D_T	**Divisor**	Divisor of the index at time T

5.2.2. Divisor Formula

Each index has a unique index divisor that is adjusted to maintain the continuity of the index's values across changes due to any token events modifying the metrics included in the computation of the weighting factor. Changes in weights due to token events are distributed proportionally across all index components. The index divisor is calculated as follows:

$$D_{T+1} = D_T \cdot \frac{\sum_{i=1}^{n}(p_T^i \cdot wf_T^i \cdot cf_T^i \cdot x_T^i) \pm \Delta TU_{T+1}}{\sum_{i=1}^{n}(p_T^i \cdot wf_T^i \cdot cf_T^i \cdot x_T^i)}$$

5. Indices Calculation

5.2. Divisor Calculation

5.2.3. Divisor Adjustment Events

A variety of token-related events may impact the total index units and consequently require an adjustment to the divisor to maintain index continuity. Common events that may trigger a divisor change include:

Token Burns Certain digital assets incorporate mechanisms to permanently remove tokens from circulation, reducing the total supply over time. This supply reduction may increase the value of the remaining circulating supply and impact the divisor.

Hard Forks A hard fork occurs when a digital asset splits into two distinct chains, each with its own circulating supply. This can introduce complexities in index calculation, requiring adjustments to reflect the valuation of the new assets.

Airdrops Airdrops involve the free distribution of tokens to holders of a particular digital asset. These distributions can alter the circulating supply and, consequently, the divisor.

Token Unlocks Certain assets feature vesting schedules or lock-up periods, restricting tokens from trading for a predetermined time. When these tokens unlock and become available for trading, the circulating supply increases, potentially impacting the divisor. Token incentive programs, including allocations for founders, teams, or advisors, often follow structured unlock events.

Inflation or deflation Some digital assets implement a fixed inflation rate, where new tokens are periodically added to the supply. Changes in the inflation rate can influence asset valuation and the divisor. Conversely, assets with deflationary models, where supply decreases over time, may also necessitate divisor adjustments.

As those events usually happen following an established pattern or may happen without any prior notice, the divisor will be revised following the same rebalancing schedule of the index. However, if Kaiko Administration Committee anticipate any material adverse effect following a token issuance, Kaiko Indices will update accordingly the divisor, notifying index consumers of the change.

5. Indices Calculation

5.3. Index Aggregation

5.3.1. Inputs

Symbol	Name	Description
t	**Events**	The timestamp at which the index is calculated
n	**Number of Assets**	The number of assets in the index
p_t^i	**Asset Price**	Price of the ith asset at time t
wf_t^i	**Weighting Factor**	Weighting factor applied to the ith asset at time t
cf_t^i	**Cap Factor**	Weighting cap factor applied to the ith asset at time t
x_t^i	**Exchange Rate**	Exchange rate applied to the ith asset at time t
TU_t	**Total Index Units**	Total index units of the index at time t
D_T	**Divisor**	Divisor of the index at time t
$Index_t$	**Index Price**	Index Price at time t

5.3.2. Laspeyres Formula

Indices are aggregated by using the Laspeyres formula, which is a measure of price changes against a fixed base quantity weight:

$$Index_t = \frac{\sum_{i=1}^{n}(p_t^i \cdot wf_t^i \cdot cf_t^i \cdot x_t^i)}{D_t} = \frac{TU_t}{D_t}$$

5.3.3. Computation Specificities

To ensure robustness and reliability, the index computation follows strict rules to handle various market events and data anomalies:

Base value The index is initialized with a base value of 100.

Rounding All rates are calculated with all available decimals

Blockchain forks In the event of a blockchain fork, the ticker of the affected underlying assets may be adjusted to reflect the most relevant instrument.

Delayed & missing data At the time of the calculation (t), some underlying components may be delayed or unavailable. To ensure index continuity, a Fixed Indices Publication Buffer is applied before the computation of the index value. If any required underlying price is missing after this buffer period, the index value is not computed.

Spurious data If for any reason any underlying price is identified as potentially suspect within an index composition, the index value is not computed.

6. Publication & Review

6.1. Publication Events

Each index follows a structured publication framework to ensure consistency and accuracy. There are two types of publication events: real-time and fixing publications. The underlying components of indices adhere to standardized methodologies, with specific aggregation parameters reviewed quarterly to maintain minimum liquidity coverage and market price representativity. For more details on the rates, publication and parameters, please refer to this link.

6.1.1. Real-Time Publications

Real-time indices are defined by publication events occurring at sub-minute granularity. To mitigate incomplete index aggregation due to potential underlying price unavailability, an Indices Publication Buffer is applied before computing the index value.

- Publication interval: 5s
- Indices Publication Buffer: 5s

6.1.2. Fixing Publications

Fixing publications are scheduled recurring events that occur at a granularity slower than a minute, typically aligning with key market closing times. These fixing events are assumed to take place daily, with three distinct publication times corresponding to major financial time zones: US, EMEA, and APAC. To mitigate incomplete index aggregation due to potential underlying price unavailability, an Indices Publication Buffer is applied before computing the index value.

- Publication interval: 1 day
- Indices Publication Buffer: 15 min

Kaiko Indices daily fixings:

- Europe - London time - 16:15 UTC
- Asia - Singapore time - 08:15 UTC
- North America - New York time - 20:15 UTC

6. Publication & Review

6.2. Scheduled Review and Rebalancing

Rebalancing is a time-driven process designed to ensure that indices remain aligned with market dynamics while adhering to asset vetting and selection rules, which are further detailed in the Index Construction section.

All indices follow a Scheduled Review Scheme, where cut-off, underlying, and effective dates define the data collection, processing periods, followed by the implementation of updated index compositions.

Scheduled Review Scheme

Step 1 – Cut-off date

End of the last day of month preceding the next review period

Data collection stops.

Step 2 – Underlying date

3 business days before the effective rebalancing date

Index components and weights are calculated and disseminated

Step 3 – Effective date

First business day following the Review Month.

Index composition and weights are implemented and effective

6. Publication & Review

6.3. Extraordinary Review

Kaiko Indices reserves the right, based on its qualified expert judgment, to exclude or replace an asset selected during the Scheduled Review. Such an extraordinary action may be taken if the asset is found to be subject to any of the following exclusion criteria:

- Fraud
- Market manipulation
- Significant loss of volume or liquidity

In such cases, the Kaiko Index Administration Committee will publish its findings, and the asset will be excluded from index calculations two days after the initial public communication.

Extraordinary Review Procedure

Step 1 – Event

Anytime between ordinary reviews

Identification by the Kaiko Indices team of an exclusion action

Step 2 – Public communication

Within the next 24 hours **Kaiko Indices Administration Committee**

publish its findings and asset exclusion if recommended

Step 3 – Asset exclusion

3 days later

The Index Administration Committee recommendation is effective

7. Index Governance

7.1. Committee Oversight

Kaiko Indices has established a robust governance framework structured around dedicated committees overseeing index operations, administration, and benchmark oversight. These committees comprise representatives from across Kaiko, including Kaiko Indices, with each member focusing on key oversight areas such as risk, compliance, methodology governance, and data sufficiency.

This structured approach ensures that decisions are not made unilaterally, but rather through rigorous challenge and discussion, considering all relevant factors before finalization. The committees operate in strict adherence to Kaiko Indices' methodologies and policies, reinforcing the integrity, transparency, and robustness of the indices.

7.2. Expert Judgment

Kaiko Indices is committed to ensuring that all index-related decisions are driven by predefined methodologies and policies, minimizing the risk of inconsistent or discretionary decision-making. However, in complex market conditions, certain situations may require the application of expert judgment. Where practicable, such decisions are escalated to the relevant governance committee, with all instances documented and reviewed by the Oversight Committee to ensure transparency and consistency. If a judgment-based decision arises in a scenario not explicitly covered by the methodology, Kaiko Indices will publicly disclose the details of the decision-making process.

7.3. Transparency, Consistency and Independence

Kaiko Indices is committed to transparently communicating all major decisions related to index calculation and administration, ensuring that stakeholders receive timely and non-selective disclosure of relevant information. To maintain alignment with market needs, Kaiko Indices actively seeks feedback from users and stakeholders and will conduct regular consultations whenever methodology changes are under consideration.

8. Kaiko Indices

8.1. Kaiko Blue-Chip Indices

8.1.1. Index Description

The Kaiko Blue Chip Indices track the top-performing digital assets by market capitalization and liquidity, offering a clear and reliable benchmark for the digital asset market. These indices are available as Top 5, Top 10, and Top 15 capturing the performance of the most liquid and widely traded assets. They provide a transparent view of market leadership and aggregate trends among high-quality digital assets.

Name	Code	ISIN	Dissemination	Inception
Kaiko 5 Index	**KT5**	FR001400LXT8	Real-time, Regional Fixing (LDN, NYC, SGP)	2018. 04. 02
Kaiko 10 Index	**KT10**	FR001400LXX0	Real-time, Regional Fixing (LDN, NYC, SGP)	2019. 04. 01
Kaiko 15 Index	**KT15**	FR001400LY19	Real-time, Regional Fixing (LDN, NYC, SGP)	2019. 10. 01

8.1.2. Index Construction

Blue-Chip Indices design follows the Index Methodology General Framework described in section 3.2.

Features	Description
Asset Universe	Kaiko Investable Universe
Asset Selection	Top N assets are selected from the ranking based on a weighted average of circulating market capitalization rank (75%) and average daily trading volume rank (25%): Average Rank = 75% x Size Rank + 25% x Liquidity Rank
Buffering	80/120 Rules: top 80% are included, current constituents up to 120% are retained, and new entrants up to 120% fill the remaining positions if needed. For more details please refer to Appendix 1 - 80/120 Index Buffer Rules.
Weighting	Weighted equally based on circulating market capitalization (50%) and average daily trading volume (50%): Weighting = 50% x Size + 50% x Liquidity
Capping	Individual asset weights are capped at 30%
Rebalancing	Reviewed and rebalanced quarterly

8. Kaiko Indices

8.2. Kaiko Market Indices

8.2.1. Index Description

The Kaiko Market Indices provide comprehensive and segmented coverage of the cryptocurrency market, representing the full investable universe of digital assets. By categorizing assets into Large Cap, Mid Cap, and Small Cap segments, the indices ensure clear and non-overlapping size and liquidity segmentation that reflects market structure and diversity.

Name	Code	ISIN	Dissemination	Inception
Kaiko Investable Index	**KMINV**	FR0014012GC2	Real-time, Regional Fixing (LDN, NYC, SGP)	2018. 04. 02
Kaiko Standard Index	**KMSTA**	FR0014012FW2	Real-time, Regional Fixing (LDN, NYC, SGP)	2014. 04. 01
Kaiko Large Cap Index	**KMLAR**	FR0014012G83	Real-time, Regional Fixing (LDN, NYC, SGP)	2014. 04. 01
Kaiko Mid Cap Index	**KMMID**	FR0014012G42	Real-time, Regional Fixing (LDN, NYC, SGP)	2018. 04. 02
Kaiko Small Cap Index	**KMSMA**	FR0014012G00	Real-time, Regional Fixing (LDN, NYC, SGP)	2015. 01. 12

8.2.2. Index Construction

Market Indices design follows the Index Methodology General Framework described in section 3.2 except for the Asset Selection and Buffering which reflects specific features associated with market segmentation rules.

Features	Description
Asset Universe	Kaiko Investable Universe
Asset Selection	Each asset from the Kaiko Investable Universe is associated to a market segment (large, mid, small) based on a combined liquidity (50%) and size score (50%). The cutoff of each segment is optimized to comply with minimum liquidity requirements. For more details please refer to next section: 8.2.3 Market Segmentation.
Buffering	Market Segment Rules: to control the migration of assets between market segments, buffer zones are implemented with boundaries set at 2/3 of and 1.5 times the market segment cutoff between the two segments. For more details please refer to next section: 8.2.3 Market Segmentation.
Weighting	Weighted equally based on circulating market capitalization (50%) and average daily trading volume (50%): Weighting = 50% x Size + 50% x Liquidity
Capping	Individual asset weights are capped at 30%
Rebalancing	Reviewed and rebalanced quarterly

8. Kaiko Indices

8.2. Kaiko Market Indices

8.2.3. Market Segmentation

The Kaiko Market Indices are derived from the segmentation of the Kaiko Investable Universe into different size and liquidity category to provide effective market coverage. Such segmentation includes Large, Mid and Small Cap assets which are then grouped to create the Investable Market and Standard Market Index along with their own segment Index.

Size and Liquidity Segments

To enable comprehensive and balanced market segmentation, each asset in the Kaiko Investable Universe is assigned a dual score. The dual score is constructed as follows:

$$DS_t^i = \frac{1}{2}\left(\frac{(ADTV_{90})_t^i}{\sum_{k=1}^{n}(ADTV_{90})_t^k}\right) + \frac{1}{2}\left(\frac{(ADCMC_{90})_t^i}{\sum_{k=1}^{n}(ADCMC_{90})_t^k}\right)$$

For more details on ADTV and ADCMC, please refer to section 4.2. Index Methodology - General Framework. Assets are then sorted in descending order of their dual score. Cumulative sums of the dual score are calculated to determine the cutoffs for each segment, according to the following target ranges:

- Large Cap Segment: Comprises assets accounting for the top 75% of the cumulative dual score.
- Mid Cap Segment: Includes assets up to the top 90% of the cumulative dual score, excluding those already in the Large Cap segment.
- Small Cap Segment: Includes assets up to the top 99% of the cumulative dual score, excluding those already in the Large and Mid Cap segments.

Liquidity Requirements and Adjustments

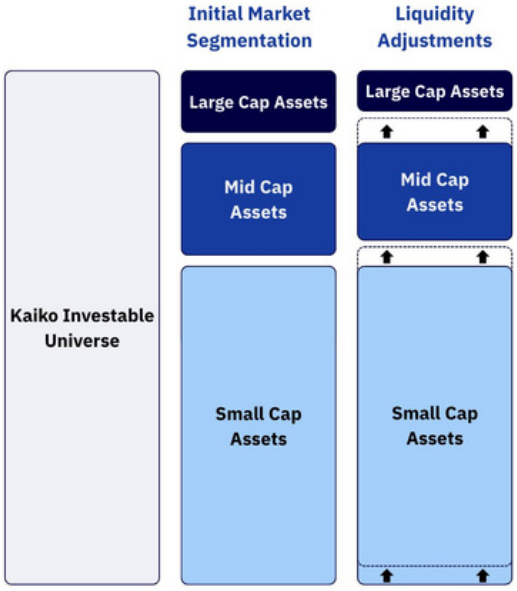
To ensure liquidity consistency in the market segmentation, a minimum liquidity requirement is established for each segment, based on the liquidity (i.e. average daily traded value) of the asset at the segment's cutoff point. The minimum liquidity requirement for each segment is set as the liquidity of the cutoff asset and a liquidity range is then applied:

- Lower bound: 50% of the minimum liquidity requirement.
- Upper bound: 115% of the minimum liquidity requirement.

The liquidity of assets at the segment cutoffs is assessed:

- If the liquidity of the cutoff asset falls within the defined range, the segment cutoff remains unchanged.
- If not:
  - The number of assets in the segment is decreased until the smallest asset's liquidity exceeds the lower bound.
  - Alternatively, the number of assets is increased until the smallest asset's liquidity is below the upper bound.

The asset meeting these adjusted criteria then defines the new segment cutoff, and the segment number of assets is set to this asset's rank.



Kaiko Universe - Market Segmentation

8. Kaiko Indices

8.2. Kaiko Market Indices

8.2.4. Index Asset Assignment & Buffering

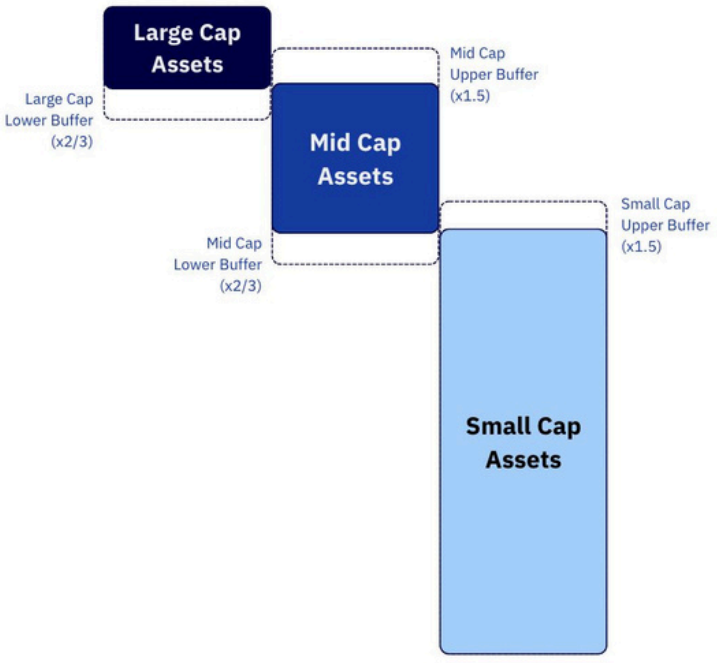
At index initiation, assets are assigned to segments based strictly on the segment cutoffs determined in section 7.2.3. Market Segmentation, following both the dual score and liquidity requirements.

At each subsequent rebalancing, before new final segment allocation is applied, buffer rules are used to preserve index stability and minimize unnecessary turnover. Buffer application:

- For each asset, compare its prior segment attribution (from the previous period) with its current segment allocation.
- If the segment remains unchanged, no buffer is applied.
- For an asset whose dual score would result in movement between segments, buffer rules are triggered:
  - The asset's dual score is compared to the buffer thresholds, defined as:
    - Lower Buffer Threshold: 2/3 of the current segment cutoff dual score.
    - Upper Buffer Threshold: 3/2 of the current segment cutoff dual score.
  - If the asset's dual score is below (for downward movement) or above (for upward movement) the main segment cutoff, but still above (for downward) or below (for upward) the Lower (or Upper) Buffer Threshold of the segment it is assigned to:
    - The asset is flagged for review but remains in its current segment for this review period.
    - If the asset was already flagged in the previous review and meets this condition again, it is reassigned to the adjacent segment (down or up, as appropriate).
  - If the asset's dual score is below the Lower Buffer Threshold (for downward movement) or above the Upper Buffer Threshold (for upward movement):
    - The asset is reassigned immediately to the new segment.

This approach ensures that segment changes occur only when justified by persistent changes in the underlying metrics, thereby supporting both the stability and representativeness of the index.

Buffer zones per segment



8. Kaiko Indices

8.3. Kaiko Sector Indices

8.3.1. Index Description

The Kaiko Sector Indices focus on specific sector of the cryptocurrency market, such as decentralized finance, blockchain infrastructure, or Meme. By targeting distinct areas of innovation and growth, these indices provide targeted exposure to key drivers shaping the digital asset landscape.

Name	Code	ISIN	Dissemination	Inception
Kaiko Layer 2 Index	**KSL2**	FR0014012FS0	Real-time, Regional Fixing (LDN, NYC, SGP)	2023. 04. 03
Kaiko Defi Index	**KSDEFI**	FR0014012FO9	Real-time, Regional Fixing (LDN, NYC, SGP)	2023. 04. 03
Kaiko Meme Index	**KSMEME**	FR0014012FK7	Real-time, Regional Fixing (LDN, NYC, SGP)	2023. 04. 03

8.3.2. Index Construction

Sector Indices design follows the Index Methodology General Framework described in section 3.2 except for the Asset Selection which is associated with Kaiko Asset Taxonomy rules.

Features	Description
Asset Universe	Kaiko Investable Universe
Asset Selection	Assets are selected from the represented sector in the Kaiko Asset Taxonomy. For more details please refer to section 8.3.3. Kaiko Asset Taxonomy.
Buffering	No buffer applied.
Weighting	Weighted equally based on circulating market capitalization (50%) and average daily trading volume (50%): Weighting = 50% x Size + 50% x Liquidity
Capping	Individual asset weights are capped at 30%
Rebalancing	Reviewed and rebalanced quarterly

8. Kaiko Indices

8.3. Kaiko Sector Indices

8.3.3. Kaiko Asset Taxonomy

The digital asset ecosystem has grown rapidly in complexity, now encompassing a wide variety of products and services built on different blockchain technologies. Since 2009 with the introduction of Bitcoin, the ecosystem has expanded significantly, covering more use cases, diverse architectures, and a vast number of coins and tokens. With the continued growth and ever-changing regulatory landscape in the digital asset market, there remains a strong need for a comprehensive classification system to bring structure and clarity to provide clear answer to the market participants.

Kaiko has unveiled a proprietary digital asset classification system inspired by the CFTC regulatory framework[1]. This system is designed to define the Kaiko Investable Universe of digital assets through a standardized methodology that will adapt and grow in step with the evolving ecosystem. Digital assets classified as Asset-Referenced Tokens (ARTs) or Electronic Money Tokens (EMTs), as defined by the European Banking Authority (EBA), are not subject to this Taxonomy.

Kaiko Asset Taxonomy consists of 3 Classes, 9 Categories and 19 Subcategories. The 3 classes follows the definition of CFTC regulatory framework. The classifications can be presented in either text and numeric formats, 5-digit code with a text description.

Digital Assets Platform

Non-redeemable digital tokens that incentivize network security or act as a medium of exchange within a blockchain platform without carrying no rights against the issuer.

- 01100 Blockchain
- 01200 Smart Contract Platform
- 01300 Staking
- 01400 DeFi
- 01500 Culture

Functional Digital Assets

Utility tokens are non-redeemable digital tokens granting specific rights like governance or rewards within an application or community, with evolving functions.

- 02100 Information Technology
- 02200 Utilities Application
- 02300 Business service

Other Digital Assets

A digital asset often inspired by a popular cultural reference lacking any specific functional purpose. Its value is primarily driven by community engagement and social trends.

- 03100 Meme

8. Kaiko Indices

8.4. Kaiko Thematic Indices

8.4.1. Index Description

The Kaiko Thematic Indices provide a targeted exposure to broader themes or use cases derived from the digital asset industry. These assets, represented in this family, often serve as building blocks for specialized areas, enabling Kaiko's thematic indices to provide investors with exposure to these complex and evolving use cases.

Name	Code	ISIN	Dissemination	Inception
Kaiko AI Index	**KSAI**	FR0014012FG5	Real-time, Regional Fixing (LDN, NYC, SGP)	2022. 10. 03
Kaiko Tokenization Index	**KSTKNZ**	FR0014012FC4	Real-time, Regional Fixing (LDN, NYC, SGP)	2022. 01. 03

8.4.2. Index Construction

Thematic Indices design follows the Index Methodology General Framework described in section 3.2, except for the Asset Selection which is associated with Kaiko Theme Classification rules.

Features	Description
Asset Universe	Kaiko Investable Universe
Asset Selection	Assets are selected from the represented thematic in the Kaiko Theme Classification. For more details please refer to section 8.4.3. Kaiko Theme Classification.
Buffering	No buffer rules applied.
Weighting	Weighted equally based on circulating market capitalization (50%) and average daily trading volume (50%): Weighting = 50% x Size + 50% x Liquidity.
Capping	Individual asset weights are capped at 30%
Rebalancing	Reviewed and rebalanced quarterly

8. Kaiko Indices

8.4. Kaiko Thematic Indices

8.4.3. Kaiko Theme Classification

Drawing upon market consensus and its own research, Kaiko identifies and selects assets from the Kaiko Investable Universe that align with the proposed themes. Some of the themes are described below:

Artificial Intelligence

Digital asset that integrates Artificial Intelligence (AI) with blockchain technology, focusing on innovations in decentralized AI, distributed computation, and AI-enhanced blockchain applications. It fulfils one or more of the following criteria:

- Lead in integrating AI with blockchain technology.
- Focus on enabling decentralized AI or distributed computation.
- Be widely adopted with significant market activity in AI-driven blockchain applications.

Tokenization

Digital asset that primarily enables the tokenization process, including those financing the infrastructure and technology to facilitate these transformations. It fulfills one or more of the following criteria:

- A market leader in the tokenization of real-world assets.
- Have a primary focus on enabling the tokenization of real-world assets
- The means of payment for infrastructure and technology targeting the tokenization of real-world assets.

9. Appendix 1 -Buffering

9.1. 80/120 Index Buffer Rules

This section outlines the buffer rule mechanism used to reduce index turnover and enhance stability by applying defined entry and exit thresholds around the target number of constituents.

Buffer Rules

We define N as the number of constituents in the index, L the lower threshold calculated as 0.8 x N and U the upper threshold calculated as 1.2 x N.

Step 1 – Top L selection

All assets ranked 1st to Lth in terms of their Average Rank become part of the index regardless of their current membership status

Step 2 – Current members selection

All current constituents ranked from L+1th to Uth are selected for inclusion until the index has N components

Step 3 – Non-members selection

In case the two prior steps did not results in selecting N assets, the index is completed with non-constituents ranked from L+1th to Uth.

	Average Rank	In the index	1st step	2nd step	3rd step
Bitcoin	1	Yes	Remains		
Ethereum	2	Yes	Remains		
Ripple	3	Yes	Remains		
Cardano	4	Yes	Remains		
Dogecoin	5	Yes	Remains		
Polygon	6	Yes	Remains		
Solana	7	No	Enters		
Polkadot	8	Yes	Remains		
Litecoin	9	No			Enters
Tron	10	No			Does not enter
Uniswap	11	Yes		Remains	
Chainlink	12	No			Does not enter
Cosmos	13	Yes			Exits
...	...	...			

Disclaimer

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of Challenger Deep SAS or its subsidiaries (collectively, "Kaiko") and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or redisseminated in whole or in part without prior written permission from Kaiko. All rights in the Information are reserved by Kaiko. The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other Kaiko data, information, products or services. The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. KAIKO DOES NOT MAKE ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, KAIKO EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

CONTACT

Paris
33 rue du Louvre,
75002 Paris,
France

Singapore
30 Prinsep St,
Singapore,
188647

New York
500 7th Ave,
New York, NY,
10018

London
34-37 Liverpool Street,
London,
EC2M7PP

Kaiko
smart data

www.kaiko.com