

BOLD **Index**

Rulebook

About Kaiko Indices

Kaiko Indices offers institutional-grade rates 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.

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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 the BOLD Index. It provides a framework for index methodology, including asset selection, weighting criteria, calculation methodologies, and governance processes. This document should be read in conjunction with the Kaiko Multi-Asset Indices Benchmark Statement, available at [Kaiko's website](#).

2. Data Sources

2.1. Price Data

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.

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.

Reference Rates

Bitcoin in the index is priced by taking the last real-time rate at 15:00 London Time. The real-time rate is disseminated every 10 seconds and is calculated as follows

- Obtain validated transactions from selected exchanges during the last 60 seconds.
- Select the last transaction from each exchange.
- Take the median price across all selected transactions.

2.2. Gold Data

Data Provider: WM/Refinitiv

Gold prices are sourced from WM/Refinitiv, the global leader in FX and precious metals benchmarks. WMR benchmarks are recognized across the financial industry for their timeliness, transparency, and reliability, providing consistent and independently governed reference rates for spot, forward, and NDF markets.

WMR Metal Rates

Gold price for the index is denominated in USD and calculated at 15:00 London time. It uses WMR Metal Rates which is calculated hourly, using trade and order data from the EBS trading platform and LSEG sources, based on a five-minute observation window centered on each fixing time. Traded rates are prioritized, with order-book data used when trading activity is limited. More details can be found in Section 7 of the [WMR FX Methodology](#).

3. Index Construction

3.1. BOLD Index Methodology

3.1.1. Index Description

The BOLD index is developed to provide a rule-based and transparent way to track the value of a portfolio consisting of Bitcoin and Gold.

ByteTree Asset Management is a research-driven investment adviser, ready for the opportunities and challenges that a world of digital assets presents. ByteTree extracts and applies data directly from the bitcoin network to give optimal investment outcomes. Building on ground-breaking analysis since 2014, ByteTree provides investment solutions that combine robust operational infrastructure with rigorous analysis of the underlying ecosystem.

This methodology clearly determines what constitutes an active market for the purposes of each index, and establishes the priority given to different types of input data. The methodology takes into account factors like the size and liquidity of the market, the transparency of trading, the positions of market participants, market concentration, and the adequacy of any sample to represent the market or economic reality that the benchmark is intended to measure.

3.1.2. Construction Parameters

Asset Universe:

Bitcoin and gold

Asset Selection:

Bitcoin and gold

Target Weights:

Proportional to the inverse volatility, so that an equal amount of risk is allocated to both assets

Rebalancing Frequency:

Monthly on the last business day of the month.

3.1.3. Identifiers

Tickers:

BOLD1

Long Name:

Bytetree BOLD1 Inverse Volatility Index

Bloomberg:

BOLD1

Refinitiv:

BOLD1

ISIN:

SE0016831127

3.1.4. Details

Base Value:

1000

Currency:

USD

Type:

Price return

Dissemination:

Daily 17:00 Central European Time

3. Index Construction

3.1. BOLD Index Methodology

3.1.5. Weighting

BOLD contains bitcoin and gold, weighted such that an equal amount of risk is invested into both assets. The more volatile bitcoin is (relative to gold) the lower the target weight in bitcoin. The target weight in bitcoin is proportional to its inverse volatility, and calculated by

$$\frac{1/\sigma_B}{1/\sigma_B + 1/\sigma_G}$$

Where σ_B , σ_G are the 360 day volatility of bitcoin and gold, respectively. The target weight of gold is one minus the target weight in bitcoin. In the calculation of target weights, data up to five business days prior to the rebalancing date is used.

3.1.6. Rebalancing

The index is rebalanced periodically, by default monthly, with the rebalancing date set to the last business day of the month. Rebalancing involves a selection of constituents and calculation of their target weights. Calculations are done using the closing prices on the rebalancing date. The new quantities per asset are used on the opening of the day after rebalancing. After the rebalance, the portfolio's weights per asset are updated so that they equal the target weights per asset.

3.1.7. Calculation

The index value is given by the weighted sum over all constituents of quantity times price divided by a divisor. The quantity per asset is unchanged between rebalances and is set such that the target weight per asset is reached after rebalancing. The divisor enforces index continuity on rebalancing. It includes a daily accrued fee, by default set to zero. The divisor is defined so that the index starts at a certain start value, which ensures each index tracks the value of a certain amount of capital invested on the start date.

4. Index Governance

4.1. 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.

4.2. 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.

4.3. 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.

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