



Kaiko

Indices

Vinter Crypto Finance Indexes

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Methodology

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.

Introduction

The Vinter Crypto Finance Indexes are a family of benchmarks. The indexes are developed to provide a rule-based and transparent way to track the value of a portfolio. Each index measures the value of an investment strategy.

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 considers 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.

Crypto Finance has offered crypto and blockchain services to institutional and professional clients since 2017. Its market-leading, integrated platform enables secure access to invest in, manage, trade, and store digital assets. Crypto Finance is helping to professionalize the emerging digital asset market thanks to its industry experience and market-leading technological solutions. The firm received several awards and recognitions over the past few years, including being named one of the Top 50 blockchain companies in the Crypto Valley and one of the Top 100 Swiss startups.

Read more at cryptofinance.ch.

Invierno AB ("Vinter") is a pioneering index provider specialized in crypto assets, playing a key role in the emerging crypto ETF industry. The firm collects digital asset data from hundreds of sources, transforming proprietary strategies into investable products.

Read more at vinter.co.

Indices

VCFWB3

The Vinter CF Crypto Web3 Index ("VCFWB3") contains the crypto assets enabling the emergence of the third iteration of the internet: the Web3. The index selects the largest assets and weighs them based on a combination of market capitalization, momentum score, and social media interest. It is rebalanced quarterly on the third Friday of the month, starting at the end of March.

Construction

Universe:

All eligible assets with the "Web3Ecosystem" label as defined in the [Vinter Taxonomy](#).

Selection:

As many assets as possible with a minimum of 5 assets.

Weighting

Proportional to the Asset Score, which is a linear combination of market capitalization, momentum, and social media interest. The weight per asset is capped at 30% and floored at 2% to ensure that no asset has a weight above 30% or below 2% after rebalancing. The excess weight is redistributed proportionally among the non-capped assets. The Asset Score is defined in the section of the same name, below.

Rebalancing:

Quarterly on the third Friday of the month, starting at the end of March.

Rationale:

Invest in the crypto assets that make Web3 possible. The Web3 vision imagines the next iteration of the internet, where users control their online data and online services are provided by decentralized protocols.

Details

Currency:

USD

Base Value:

1000.00

Type:

Price Return

Calculation:

Daily at 4.00 pm London time (5.00 pm Zurich time)

Launch Date:

2023-05-15

Publication:

Daily after 4.10 pm London time (5.10 pm Zurich time)

Base Date:

2021-01-01

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VCFWB3

Identifiers

Full Name:

Vinter Diffuse Digital 30 Index

Ticker:

VCFWB3

ISIN:

SE0020180263

FIGI:

BBG01FZVJMX3

Bloomberg:

VCFWB3

Refinitiv:

.VCFWB3

Vinter API:

vncf-wb3-50-d

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VCFWB3

Asset Score

The Vinter CF Crypto Web3 Index uses a ranked scoring system to identify the most promising assets based on i) market capitalization, ii) social media interest, and iii) momentum.

The Asset Score is a weighted sum of these three factors, with a 70% weight on the market capitalization score, 15% on the social media interest score, and 15% on the momentum score.

All scores are calculated at review date. Every score is scaled so that the minimum score is 1, the maximum score is 10, and all other assets are scored between 1 and 10 yet in proportion. The final value of the score is given by the normalization formula:

$$V_f = 9 \cdot \frac{V - \min(V)}{\max(V) - \min(V)} + 1$$

i) Market capitalization is given by price times circulating supply, calculated at midnight UTC.

ii) Social media interest is calculated based on the frequency count from large online text corpora (Reddit, Twitter, Telegram, and Bitcointalk).

iii) Momentum is calculated using the following algorithm:

- Get the 30-day and 60-day returns for all assets.
- Calculate the risk-adjusted return by dividing the returns with the volatility of the asset. The volatility is calculated using daily data for the last 90 days.
- Convert the 30-day risk-adjusted returns to a Z-score by subtracting the assets' mean and dividing by the assets' standard deviation.
- Convert the 60-day risk-adjusted returns to a Z-score by subtracting the assets' mean and dividing by the assets' standard deviation.
- Average the two Z-scores.
- Derive the other assets' scores by attributing a score between 1 and 10, proportional to the asset Z-score.
- Apply a cap and a floor so the value cannot be above 3 or below minus 3.
- Attribute the score of 10 to the asset with the highest score.
- Attribute the score 1 to the asset with the lowest score.

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VCFMOM

The Vinter CF Crypto Momentum Index ("VCFMOM") is selecting the largest assets by market capitalization and weighting them according to their number of active addresses as well as price momentum. A cap of 15% promotes diversification while a floor of 2% eliminates any asset with weak active addresses and price momentum scores. The index is rebalanced monthly on the third Friday of the month.

Construction

Universe:

All eligible assets.

Selection:

Assets from the Top 15 by current market capitalization that have a Ultimate Weight superior to 0. The Ultimate Weight is defined in the Enhanced Momentum Score section below.

Weighting

Equal to an asset's Ultimate Weight.

Rebalancing:

Monthly on the third Friday of the month.

Rationale:

Invest in the assets presenting the highest level of blockchain adoption as defined by on-chain activity combined with a price momentum factor. By blending those metrics, investors get a more comprehensive and nuanced position to extract optimized market performance.

Details

Currency:

USD

Base Value:

1000.00

Type:

Price Return

Calculation:

Daily at 4.00 pm London time (5.00 pm Zurich time)

Launch Date:

2023-05-15

Publication:

Daily after 4.10 pm London time (5.10 pm Zurich time)

Base Date:

2021-01-01

Indices

VCFMOM

Identifiers

Full Name:

The Vinter CF Crypto Momentum Index

Ticker:

VCFMOM

ISIN:

SE0020180255

FIGI:

BBG01G7N7T59

Bloomberg:

VCFMOM

Refinitiv:

.VCFMOM

Vinter API:

vncf-mom-15-d

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Enhanced Momentum Score

The momentum score is calculated in three steps: i) Momentum Sharpe Signal, ii) Combined Weight, iii) Ultimate Weight.

i) Momentum Sharpe Signal

First, the Momentum Sharpe Signal (MSS) per asset is calculated for the number of Active Addresses and the Price Momentum by dividing the Signal (S) with its standard deviation. Mathematically, it is expressed as:

$$MSS_{i,t,d,h} = \frac{S}{\sigma_S}$$

where the asset is denoted as i, the review date as t, the data as d= data (which is either "AA" for Active Addresses or "PM" for Price Momentum), and the horizon as h which represents different momentum lookbacks (Quick, Medium and Long) optimally combined to calculate the signal.

The Signal in the Momentum Sharpe Signal compares a short moving average with a long moving average, given by

$$S = \frac{SMA_{i,t}}{LMA_{i,t}} - 1$$

Where SMA_{i,t} is the Short Moving Average and LMA_{i,t} is the Long Moving Average – both with a set of lags and length parameters. The standard deviation of the signal (σ_S) is the standard deviation of S.

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ii) Combined Weight

Second, to overweight the assets with the highest Momentum Sharpe Signals, the methodology sorts assets by their MSS values, distributes them into 5 Quintiles of 3 assets and attributes a specific weight to each asset of the same Quintile. The distribution of the weights is then normalized to get the Final Quintile Weights. This is done for both Active Addresses and Price Momentum data sets.

The Quick/Medium/Long lookback weights are calculated by taking the mean of the Final Quintile Weights given nine combinations of SMA/LMA.

The Active Addresses/Price Momentum Combined Weight can be then computed by taking the weighted average of the Quick, Medium and Long lookback weights with respective weights of 25%, 32.5% and 42.5%.

The Combined Weight of an asset is calculated by calculating the weighted average of the Active Addresses Combined Weight and Price Momentum Combined Weight with respective weights of 35% and 65%.

iii) Ultimate Weight

The Optimized Consolidated Weight are calculated using a MinMax optimization algorithm enforcing different sets of caps and floors. The cap is enforced first. If a cap is enforced, the excess weight is spread equally across the non-capped assets. Subsequently, any asset with a weight under the floor is eliminated and its weight is redistributed equally across the non-capped assets.

Then, the Newly Optimized Consolidated Weights can be computed by taking the mean of the resulting Optimized Consolidated Weight.

Finally, the Ultimate Weight can be derived by applying a 15% cap and 2% floor to the Newly Optimized Consolidated Weights. The cap is enforced first, if relevant. If a cap is above 15%, the excess weight is spread equally across the non-capped assets. Subsequently, any asset with a weight under the 2% floor is eliminated and its weight is redistributed equally across the non-capped assets.

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General Construction Parameters

This section defines the general construction parameters used in designing the index such as the asset universe, the asset selection and the rebalancing weights. This section contains the details needed to calculate each index.

Universe

The asset universe is a list of all possible index constituents. The default asset universe consists of all eligible constituents. It is possible to restrict the universe to assets that only contain a certain label e.g. Metaverse or Web3 as defined in the [Vinter Taxonomy](#).

Selection

The index constituents are selected from the asset universe. One example is to select the ten largest assets based on the current market capitalization. In general, the selection process can be based on a number of factors such as market capitalization, trading volume, returns, volatility, or a combination thereof.

Assets are selected on the review date, five business days before the rebalancing date. Note that Review Date is not the same as the Yearly Review.

If it is impossible to reach the intended number of constituents, the Index Committee can decide to either include non-eligible constituents or allow the index to have fewer constituents than intended. The decision shall be made publicly available.

Weighting

Rebalance weights are calculated on the review date.

The current weights per asset display the current asset allocation, and is relevant for an ETF creation/redemption. The current weights change every day, based on price movements, whereas the rebalance weights are unchanged between rebalances. The rebalance weights are updated only when the index is rebalanced.

The weight for each asset is always between 0 and 1. The sum of all constituent weights is equal to 100%.

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Rebalancing

All indexes are rebalanced periodically, following the [rebalancing calendar](#).

Rebalancing involves the selection of constituents and the calculation of their rebalancing weights. Calculations are done using the closing prices on the rebalancing date. The new weights per asset are used on the opening of the day after rebalancing.

After the rebalance, the portfolio is updated so that its current weights per asset equal the rebalancing weights per asset. The greater the difference between current and rebalancing weights, the larger the portfolio turnover.

Eligible Assets

Assets are eligible as index constituents if they meet the [eligibility criteria](#) listed in Vinter's [benchmark statement](#).

An otherwise eligible asset may be excluded from the index if the constituent is deemed to impose heightened investment risks due to factors such as integrity and transparency of the network or criminal investigations against stakeholders with substantial influence on the network or protocol.

Calculation

The index value is given by the weighted sum over all constituents of quantity times price divided by a divisor.

The price per asset is calculated by Vinter, as detailed in the constituent pricing section.

The quantity per asset is set to the Rebalancing Weight per asset after rebalancing. In a price return index, the quantity per asset is unchanged between rebalances.

The divisor enforces index continuity on rebalancing. 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.

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Constituent Pricing

The Vinter reference rates are used to price assets and can vary from one index to another. The algorithms are described in [Vinter's single asset reference rates](#). The [Benchmark Statement](#) defines the eligibility criteria for input data.

Market Capitalization

The market capitalization is given by price times circulating supply. Using circulating supply is similar to using public float for an equity index. The market capitalization is calculated at midnight UTC.

Index Provider

Invierno AB, Reg. No. 559207-4172, Box 5193, 10244 Stockholm, Sweden (“Vinter”)

Benchmark Administrator

Vinter is the benchmark administrator and the central recipient of input data with the ability to evaluate the integrity and accuracy of input data on a consistent basis. Vinter is responsible for the development of the index and controls all aspects of the provision of the benchmark. Vinter has established a permanent and effective oversight function, governance processes subject to periodic reviews and audits, policies regarding complaints, ethics, conflicts of interest, and contingency, and has established a clear internal organizational structure with consistent roles and responsibilities to identify, prevent, disclose, mitigate, and manage conflicts of interest. The European Securities and Markets Authority has included Invierno AB in its register of Benchmark Administrators approved to carry on the regulated activity of administering a benchmark.

Calculation Agent

Vinter is the calculation agent and is responsible for determining the value of the index described in the index methodology. Vinter calculates the index values in accordance with the index methodology. Upon the request of the benchmark administrator, the calculation agent shall provide all information available on the composition and details of the calculation of the requested index.

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VCFMOM

Document Versions

Version

Date of update

Change

1.0.

2023-05-15

Initial version published.

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CONTACT

Paris

2 rue de Choiseul
75002 Paris
France

Singapore

9 Battery Road
Singapore
049910

New York

750 Lexington Ave,
New York, NY 10022
USA

London

73 Watling Street
London
EC4M 9BJ



www.kaiko.com



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