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The Bitcoin Trend Indicator

Navigate the Crypto Seasons

CoinDesk Indices presents the Bitcoin Trend Indicator, a daily signal which conveys the presence, direction, and strength of the current price trend of bitcoin.

A brief introduction to trend signals

Trend signals are used in traditional, alternative and digital assets investment management as a way to pursue uncorrelated returns. The simple, but powerful, idea behind trend strategies is that markets respond slowly to news and sea changes. Trend investors seek to harvest returns by “riding” an uptrend or a downtrend as the market adapts. Trend, also referred to as time series momentum, is well documented in academic literature and practiced in quantitative finance and in the CTA community in long-only and long/short implementations.

How to create a trend signal

Identifying an up- or downtrend entails comparing recent prices to older prices over a recent historical period (the “lookback window”). If recent prices are higher, an uptrend might be indicated; if recent prices are lower, a downtrend may be in place. A trend strategy uses that signal to position long or short in expectation that the up or down trend will persist. The choice of lookback window (or, better yet, multiple windows) can impact the predictive qualities of the trend signal. The best choice can vary depending on the asset class.

How the Bitcoin Trend Indicator works

The Bitcoin Trend Indicator uses four different lookback windows chosen with the 24/7 trading cycle of crypto assets in mind. Each day, a trend value is calculated from each lookback window by comparing recent prices to older prices within the window. A “1” indicates rising prices in the lookback and a “-1” indicates falling prices. The Bitcoin Trend Indicator is the average of these values for the four lookback windows:

Trend values for four lookback windows	Bitcoin Trend Indicator	Indication
1, 1, 1, 1	1	Significant uptrend
-1, 1, 1, 1	0.5	Uptrend
-1, -1, 1, 1	0	Neutral
-1, -1, -1, 1	-0.5	Downtrend
-1, -1, -1, -1	-1	Significant Downtrend

More information on the calculation of the Bitcoin Trend Indicator can be found in the Methodology Document on coindeskmarkets.com/bti.

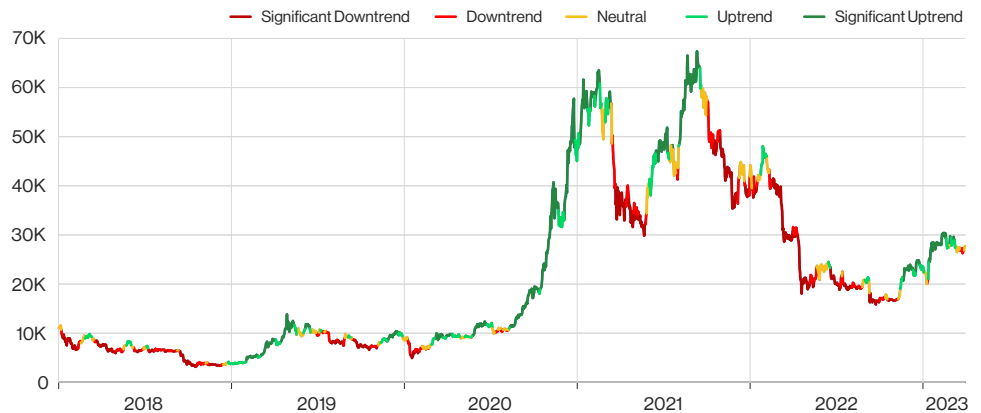
Historical performance

Exhibit 1

The Bitcoin Trend Indicator

We back-tested the Bitcoin Trend Indicator over a five-year historical period, using the CoinDesk Bitcoin Price Index (XBX). The value of the Bitcoin Trend Indicator is shown in the color of the time series line. We can make the general observation that the Bitcoin Trend Indicator has been historically successful at identifying the majority of long-term uptrends and downtrends in the price of bitcoin.

The CoinDesk Bitcoin Price Index (XBX) color-coded by the value of the Bitcoin Trend Indicator



This series shows the historical daily value of the Bitcoin Trend Indicator (BTI) represented by the color of the CoinDesk Bitcoin Price Index (XBX) as shown in the legend.

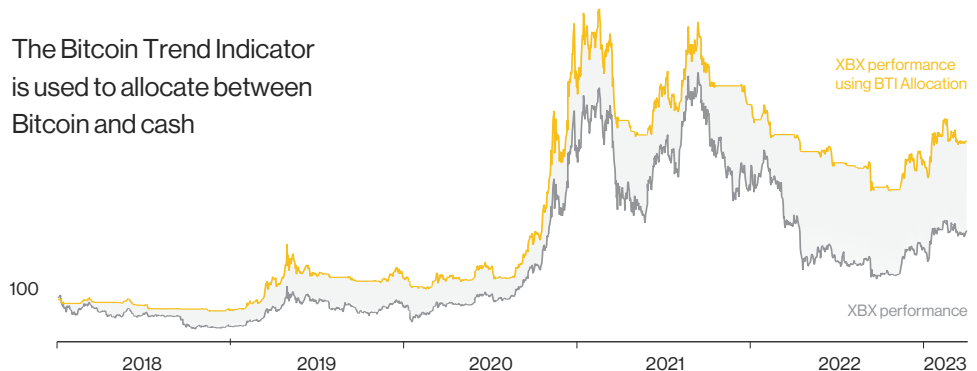
Source: CoinDesk Indices.

A hypothetical long-only implementation

Exhibit 2

Hypothetical BTI-driven performance

We now use the Bitcoin Trend Indicator to implement a hypothetical long-only strategy that allocates between bitcoin and a risk-free asset ("cash"). The objective of this strategy is to maintain exposure to bitcoin proportionate to the strength of the Bitcoin Trend Indicator, varying from 100% bitcoin to 100% cash. We can observe that the portfolio of bitcoin and cash, as informed by the Bitcoin Trend Indicator has reduced drawdowns during "crypto winters" while still participating in price uptrends.



The hypothetical performance series shown here represent a passive long position in Bitcoin as referenced by the CoinDesk Bitcoin Price Index (XBX) and a dynamic strategy that allocates between Bitcoin and a zero-yield, risk-free asset, the allocation to Bitcoin being proportional to the value of the Bitcoin Trend Indicator. The strategy is rebalanced weekly and is shown gross of transaction costs and fees. Past performance is no guarantee of future results.

Source: CoinDesk Indices.

Using the Bitcoin Trend Indicator

CoinDesk Indices works with our clients to develop, document, and support systematic investment strategies and products. Our experience base includes institutional-class indexing, structuring, research, and go-to-market expertise that can make best use of signals such as the Bitcoin Trend Indicator.

For more information, please contact us at sales@coindesk-indices.com.

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