

CoinShares Gold and Cryptoassets Index (COINCGCI)

Benchmark Statement

28 of April 2020

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1. General information

Index Name: CoinShares Gold and Cryptoassets Index (COINCGCI)

Initial date of publication: 28th of April 2020

Index Owner: CoinShares (Holdings) Limited (Jersey)

Index Administrator: Compass Financial Technologies (France)

Index Calculation Agent: Compass Financial Technologies (France)

2. Index description and objective

Two noteworthy characteristics of the returns of non-stablecoin cryptoassets are their high volatility, which brings with it a high level of risk, and their high intraclass correlation, which limits the benefits that can be had by diversifying across multiple cryptoassets. Yet cryptoassets exhibit no correlation with gold, a highly-liquid yet scarce asset which has proved to function as a safe haven during crises affecting traditional financial systems.

Although volatility poses challenges in terms of increased uncertainty, there are also benefits to be had from its proper management through diversification and regular rebalancing (Bouchey et al., 2012, *The Journal of Wealth Management. Volatility harvesting: Why does diversifying and rebalancing create portfolio growth?*). This is exemplified by the so-called Shannon's Demon approach in which two, ideally uncorrelated, assets -- at least one of which is highly volatile -- are periodically rebalanced to maintain an ideal target allocation. The resulting expected growth rate is greater than the arithmetic mean of the individual expected growth rates, while the variance of the returns is less than the mean of the individual variances (Poundstone, 2005. *Fortune's Formula.*).

The CoinShares Gold and Cryptoassets Index is a low-volatility index that utilises the concept of volatility harvesting through (a) forming a basket of cryptoassets and (b) combining it with gold using weighted-risk contribution as a rebalancing mechanism. By decreasing volatility levels, it seeks to yield superior risk-adjusted returns when compared to a number of alternative strategies, including holding cryptoassets or gold alone. Further, it presents a moderate turnover, which should translate into moderate operating costs.

The CGCI is designed with the aim of providing diversified exposure to the alternative asset space in a way that yields a superior risk-return profile when compared to holding such assets in isolation while being orthogonal to traditional financial markets. Accordingly, the Index must:

- Be comprised of a small number of liquid, investable constituent assets;
- Exhibit a relatively stable composition in terms of constituents with asset weights that do not vary dramatically between rebalancing periods, leading to low turnover;
- Utilize some means of principled risk control leading to lower volatility;
- Be specified in a clear and unambiguous manner to facilitate validation and reproducibility;
- Hold constituent assets on a long basis only;
- Not make use of leverage.

3. Regulatory information

The Benchmark is non-significant benchmark according to EU Regulation 2016/1011 given:

(a) it is not used directly or indirectly within a combination of benchmarks as a reference for financial instruments or financial contracts or for measuring the performance of investment funds having a total average value of at least EUR 50 billion on the basis of all the range of maturities or tenors of the benchmark, where applicable, over a period of six months; and



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(b) it has market-led substitutes and, in the event that the benchmark ceases to be provided or is provided on the basis of input data no longer fully representative of the underlying market or economic reality or unreliable input data, the benchmark administrator do not anticipate a significant and adverse impact on market integrity, financial stability, consumers, the real economy or the financing of households or businesses in the EU.

4. Index Methodology

4.1. Constituents and Market Data

4.1.1. Constituent Eligibility and Selection

The CGCI is composed of a fixed number of constituents including five cryptoassets and physical gold. The cryptoasset constituents of the Index are the top five eligible cryptoassets based on the 6-month rolling average of free-float market capitalisation.

4.1.2. Data Sources

The daily price levels of the crypto-constituents in the Index are calculated using historical tick-by-tick trade data provided by Kaiko. Kaiko is an independent digital assets market data provider based in Paris since 2014. Kaiko collects, normalizes, stores, and delivers raw, normalized trade and quote data on 74 exchanges and more than 9'000 pairs. Kaiko has worked with over 300 customers globally, including, funds, institutions, regulators, academics and crypto start-ups. Kaiko's methodology is fully public and can be found on their website. Their data collection runs on multiple redundant global centers, which ensures the consistency of data delivery and their data is versioned to avoid being impacted by breaking changes.

The 6-month rolling mean market capitalisation is computed through the daily market capitalisation figures, calculated by multiplying the daily price of each constituent by its daily liquid supply. Liquid supply data is provided by Messari and prices are obtained through the process explained in the index methodology. We define an asset's liquid supply as the number of units that currently exist on-chain and which are not known to be encumbered by any contracts. Note that an encumbering contract could be both an on-chain smart-contract, or a traditional human-space legal contract. Thus, this figure takes into account both on-chain-lockups and founder/investor vesting and lockup periods.

Messari, Inc. is a market intelligence company focused on the digital asset ecosystem. The company's tools and research provide customers with actionable insights to confidently make decisions in a fast moving space.

The daily price levels of the gold basket in the Index is calculated using the LBMA Gold Price PM data provided by ICE Benchmark Administration (IBA). IBA provides the auction platform, methodology as well as overall independent administration and governance for the LBMA Gold Price, with the LBMA holding the intellectual property rights. The PM price is set at 15:00 London time in US dollars.

4.1.3. Index Disruption – Extraordinary events

“Index Disruption Event” or “Extraordinary Event” means, in the determination of the Index Administrator, the occurrence of any of the following events affecting the Index:

- Temporary loss of sufficient data
- Index Contributor default to provide the input data on time



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- the Index Administrator considers that the Index Contributor cannot pursue its role as Index Contributor

If an Index disruption or an Extraordinary event occurs, the Index Administrator will take any appropriate action to remedy the disruption.

4.2. Amendment to the Index methodology

The Index methodology may be supplemented, amended in whole or in part, revised or withdrawn at any time. Supplements, amendments, revisions and withdrawals may also lead to changes in the way the Index is compiled or calculated or affect the Index in another way.

In the absence of exceptional circumstances affecting the Index calculation or methodology, the Index is reviewed annually in November. The review includes re-testing model parameters and particularly re-defining the new stratum for the coming period.

Changes in Index methodology or computation parameters decided during the annual review are published on the last Index Eligible Business day of March and implemented on the first Index Publication Day of April.

The results of the CGCI Steering Committee will be published in a press release on COMPASS and CoinShares websites and distributed timely to data vendors and major news sources.

The Index Administrator shall inform Index licensees of any amendment to the Index methodology with reasonable prior notice. The notification document shall provide Index licensees with the amendments, the reasons for making such amendment and the effective date of the changes.

5. Cessation of the Index

The Index Administrator has established procedures to be followed for termination of a Compass Index. Any termination of a Compass Index must be approved in advance by the Index Committee. A notice to licensees will be published in advance of the termination.

Before deactivating an index, the Index Administrator always determines whether there are any listed financial products issued on that index as the underlying. The Index Administrator terminates indices only provided that:

- All existing commercial customers have been consulted, and commercial relationships have been terminated or transitioned accordingly.
- Consultations with stakeholders have not led to the decision to continue the index.

The Index Administrator is not responsible for determining or offering an alternative index to its subscribers or other stakeholders when the Index is terminated. However, the Index Administrator may recommend an alternative index if it considers, based on various criteria, that this alternative index could be a credible substitute index.



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