



# CoinShares Compass Basket Indices

## Methodology



May 10<sup>th</sup>, 2024

## Version History

Readers can access other versions of the methodology for the CoinShares Compass Basket Indices online when they become available on Compass Financial Technologies website ([www.compass-ft.com](http://www.compass-ft.com)).

<b>Date</b>	<b>Version</b>	<b>Change</b>
March 8 <sup>th</sup> , 2023	1.0	Methodology Publication
May 9 <sup>th</sup> , 2023	1.1	OKcoin, ItBit, BitFlyer and Bittrex are removed from the list of eligible exchanges. Effective on May 10th 2023
July 7 <sup>th</sup> , 2023	1.2	Binance.US is removed from the list of eligible exchanges. Max Shannon replaces Marc Arjoon as a Steering Committee member. Effective on July 7th 2023
November 6 <sup>th</sup> , 2023	1.3	The following eligibility requirement has been added: an eligible crypto asset should be supported by eligible custodians and market makers on relevant exchanges (each as defined by the Index Committee from time to time) . Effective on November 6th 2023
May 10 <sup>th</sup> , 2024	1.4	Change of volume data provider

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## **Changes versus previous version**

The Index Committee has decided to add the following requirement in the list of Underlying Component Eligibility requirements:

To be considered as an Eligible Underlying Component, a cryptoasset linked to a CCRI Index needs, in addition to satisfying the other existing constraints, be supported by eligible custodians and market makers on relevant exchanges (each as defined by the Index Committee from time to time).

The change will be effective on November 6th 2023.

## 1 Introduction

The CoinShares Compass Basket Indices are a family of diversified digital asset indices designed with the objective to offer exposure to the cryptoassets space and to its sectors.

The Indices are composed of the most representative and liquid cryptocurrencies or tokens satisfying eligible requirements defined in Section 3.2. Weightings are based on multiple criteria including liquidity or market capitalization.

The components have to be selected within the Compass Crypto References Indices (CCRI) registered as benchmarks under the EU benchmark regulations (BMR).

The CoinShares Compass Basket Indices combine expertise in cryptocurrency and index engineering to offer investors a diversified exposure to the digital asset class.

Indices may be accessed online on the Compass Financial Technologies website ([www.compass-ft.com](http://www.compass-ft.com)) or on Bloomberg or Refinitiv.

The Index Administrator and Calculation Agent is Compass Financial Technologies (France).

## 2 Data Source

### 2.1 Volume Data Providers

The daily volumes are sourced from the eligible exchanges.

### 2.2 Market Capitalization Data Provider

The Circulating Supply is provided by CoinGecko. (<https://www.coingecko.com/>).

**CoinGecko:** CoinGecko is a cryptocurrency data aggregation and tracking web site that provides 360 degree overview of digital currencies and provides tools for users to fundamentally analyze the market. In addition to tracking price, volume, and market capitalization, CoinGecko tracks community growth, open-source development, major events and on-chain metrics. It was founded in 2014 and is based in Malaysia.

## 3 Index Underlying Components

### 3.1 Underlying Components

CoinShares Compass Basket Indices invest in single digital asset crypto indices, called Underlying Components.

The prices used to compute the Indices are the Underlying Component Closing Prices. They are based on the Compass Crypto Reference Indices prices.

The Compass Crypto Reference Indices (*CCRI*) have been designed to provide institutional investors with independent and robust cryptocurrency reference prices. Based on a resilient and BMR-ready compliant methodology, they serve as independent and transparent reference prices to value cryptocurrency portfolios or as benchmarks for investors willing to issue investment products tracking cryptocurrencies prices.

More details on the CCRI indices including their methodology are available on the Compass website ([www.compass-ft.com](http://www.compass-ft.com))

### 3.2 Underlying Component Eligibility requirements

To be considered as an Eligible Underlying Component, a cryptoasset linked to a *CCRI* Index needs to satisfy the following criteria:

- Must trade in USD
- Must not be linked to the value of a fiat currency or fiat stablecoin
- Must have a liquid trading market on a reputable digital asset exchange
- Has at least a 3 month history of trading on an eligible exchange
- Must not be a digital asset focused on privacy (e.g., Monero; ZCash; etc.)
- Has no known security vulnerabilities
- Must be eligible for a listing on XETRA (unless otherwise decided by the Index Committee).
- Is traded on at least one of the Eligible Exchanges (or equivalent) (Section 3.3)
- Must be supported by eligible custodians and market makers on relevant exchanges (each as defined by the Index Committee from time to time)
- Must not be considered as a "Prohibited Coins"

"Prohibited Coins" means any cryptoasset(s) which, in the reasonable opinion of the Index Committee, falls within any of the following categories, in each case as determined by the Index Committee on the Index review date:

- any stable coin (including asset-references tokens and electronic money tokens) where the relevant protocols and rules governing such stable coin do not provide for prudent collateralisation requirements
- any cryptoasset which rules and protocols hide or obscure transactions on its blockchain by way of anonymising the origin and destination of transacted coins or tokens, the amount transacted and/or balances of wallet address; and/or
- any cryptoasset which is regarded as a "meme coin" and which has all of the following characteristics:
  - i is considered by the broad investment community to be a "meme coin"
  - ii is associated with comical or animated memes; and
  - iii has no intrinsic utility or functionality

Outside of exceptional circumstances, Eligible Underlying Components are reviewed every month based on eligibility requirements described above.

### 3.3 Eligible Exchanges

The list of Eligible Exchanges as of July 7<sup>th</sup> 2023 is:

<b>Eligible Exchanges</b>
Bitstamp
Bitfinex
Coinbase
Gemini
Kraken
LMAX

Table 1: Eligible Exchanges



## 4 CoinShares Compass Basket Indices

### 4.1 CoinShares-Compass Top 10 Crypto Market Index

#### Index Description - Motivation

The CoinShares-Compass Top 10 Crypto Market Index is a diversified digital asset index which seeks to track the performance of the ten largest digital assets by market capitalization, weighted according to their market capitalization and subject to a maximum weighting of 35% for any single constituent. The CoinShares-Compass Top 10 Crypto Market Index selects its underlying constituents from a range of eligible digital assets and seeks to reflect large trends in the digital asset market.

Outside of exceptional circumstances, the Underlying Components are selected every quarter by the Steering Committee based on eligibility requirements described above and on the Steering Committee expert judgement.

#### Index Start Date

January 15<sup>th</sup>, 2016

#### Index Launch Date

March 8<sup>th</sup>, 2023

#### Index Code

Compass : COINTEN      Bloomberg : COINTEN Index      Refinitiv : .COINTEN

#### Index Components Selection

On each Rebalancing Determination Date  $RD(t)$ , the Selected Underlying Components are defined following the steps below:

1. Select all Eligible Underlying Components
2. For each Eligible Underlying Components selected,  $RMC_{RD(t),k}$  is computed as the rolling average USD Market Capitalization over the last 30 days of Eligible Underlying Component  $k$ ,  $RD(t)$  excluded
3.  $RMC_{RD(t),k}$  are ranked in descending order
4. The Selected Underlying Components correspond to the 10 components with highest  $RMC_{RD(t),k}$

In the unlikely event where eligibility criteria are not met for 10 Underlying Components, the Index may be composed of less than 10 Underlying Components.

#### Weightings definition

Primary Weights,  $pw$ , are computed on every Rebalancing Determination Date using the average Market Capitalization over the last 30 days ( $RD(t)$  excluded) for the set of Selected Underlying Components. On each day, Market Capitalization is the USD Market Capitalization based on Circulating Supply provided by CoinGecko. For each Selected Underlying Component  $i$ , Rebalancing Determination Date  $RD(t)$  and the number of Selected Underlying Components  $N$ , we have :

$$pw_{RD(t)} = \frac{RMC_{RD(t),i}}{\sum_{k=1}^N RMC_{RD(t),k}} \quad (1)$$

Final Weights are then derived from the Primary Weights by applying the following:

Primary Weight exceeding the *CapWeight* ( $CapWeight = 35\%$ ) are fixed to *CapWeight* and the excess weight is allocated proportionately to the Selected Underlying Components with a Primary Weight superior to 0 and inferior to *CapWeight*. This process will be repeated iteratively as long as a Final Weight is greater than *CapWeight*.

### **Index Rebalancing**

We define  $R(t)$  as the Rebalancing Date preceding  $t$  and  $RD(t)$ , the Rebalancing Determination Date, as the third Business Day preceding  $R(t)$ .  $R(t)$  is the third Friday of January, April, July and October. If case of this day not being a Business Day,  $R(t)$  will be the first Business Day preceding the 3<sup>rd</sup> Friday.

The Index is rebalanced quarterly on every Rebalancing Date. The list of Selected Underlying Components may change every quarter. New weights and Selected Underlying Components are determined on every Rebalancing Determination Date.

### **Underlying Components Prices**

Underlying Component Closing Prices are the 4pm London Time fixings of the Compass Crypto References Indices (*CCRI*).

## 4.2 CoinShares-Compass Smart Contract Platform Index

### Index Description - Motivation

The CoinShares-Compass Smart Contract Platform Index (or the Smart Contract Index) seeks to track the performance of the ten largest smart contract digital assets by market capitalization, weighted according to their market capitalization and subject to a maximum weighting of 35% for any single constituent. The Smart Contract Index selects its underlying constituents from a range of eligible digital assets and seeks to reflect large trends in the infrastructure layer of the digital asset market.

### Index Start Date

July 20<sup>th</sup>, 2018

### Index Launch Date

March 8<sup>th</sup>, 2023

### Index Code

Compass : COINSMRT      Bloomberg : COINSMRT Index      Refinitiv : .COINSMRT

### Index Components Selection

On each Rebalancing Determination Date  $RD(t)$ , the Selected Underlying Components are defined following the steps below:

1. Select Eligible Underlying Components classified as smart contract platform coin by the Steering Committee
2. For each Eligible Underlying Components selected,  $RMC_{RD(t),k}$  is computed as the rolling average USD Market Capitalization over the last 30 days of Eligible Underlying Component  $k$ ,  $RD(t)$  excluded
3.  $RMC_{RD(t),k}$  are ranked in descending order
4. The Selected Underlying Components correspond to the 10 components with highest  $RMC_{RD(t),k}$

In the unlikely event eligibility criteria are not met for 10 Underlying Components, the Index may be composed of less than ten Underlying Components.

### Weightings definition

Primary Weights,  $pw$ , are computed on every Rebalancing Determination Date using the average Market Capitalization over the last 30 days ( $RD(t)$  excluded) for the set of Selected Underlying Components. On each day, Market Capitalization is the USD Market Capitalization based on Circulating Supply provided by CoinGecko. For each Selected Underlying Component  $i$ , Rebalancing Determination Date  $RD(t)$  and the number of Selected Underlying Components  $N$ , we have :

$$pw_{RD(t)} = \frac{RMC_{RD(t),i}}{\sum_{k=1}^N RMC_{RD(t),k}} \quad (2)$$

Final Weights are then derived from the Primary Weights by applying the following:

Primary Weight exceeding the *CapWeight* ( $CapWeight = 35\%$ ) are fixed to *CapWeight* and the excess weight is allocated proportionately to the Selected Underlying Components with a Primary Weight superior to 0 and inferior to *CapWeight*. This process will be repeated iteratively as long as a Final Weight is greater than *CapWeight*.

### **Index Rebalancing**

We define  $R(t)$  as the Rebalancing Date preceding  $t$  and  $RD(t)$ , the Rebalancing Determination Date, as the third Business Day preceding  $R(t)$ .  $R(t)$  is the third Friday of January, April, July and October. If case of this day not being a Business Day,  $R(t)$  will be the first Business Day preceding the 3<sup>rd</sup> Friday.

The Index is rebalanced quarterly on every Rebalancing Date. The list of Selected Underlying Components may change every quarter. New weights and Selected Underlying Components are determined on every Rebalancing Determination Date.

### **Underlying Components Prices**

Underlying Component Closing Prices are the 4pm London Time fixings of the Compass Crypto References Indices (*CCRI*).

## 5 Indices Calculation

### 5.1 Business Day

A Business Day means any day other than a Saturday, a Sunday which is not a bank holiday in UK and in Jersey.

### 5.2 Indices Calculation

CoinShares Compass Basket Indices are formulated as weighted baskets of cryptocurrencies or tokens. Weights are the Final Weights  $w_{Final}$  defined for each Index in their respective *Weightings definition* section. For each index, the Index price level is set to 1'000 on the Index Launch Date.

The Index price level on Business Day  $t$  from its starting base date onwards is calculated as:

$$\text{Index}_t = \left( 1 + \sum_{i \in N_{c,t}} w_{Final,i,RD(t)} \times \left( \frac{P_{i,t}}{P_{i,R(t)}} - 1 \right) \right) \times \text{Index}_{R(t)} \quad (3)$$

Where,

- $N_{c,t}$  is the set of the Selected Underlying Components of each index on day  $t$
- $R(t)$  is the most recent Index Rebalancing Date preceding  $t$
- $RD(t)$  is the most recent Index Rebalancing Determination Date preceding  $t$
- $P_{i,t}$  is the Underlying Component Closing Price representing the USD price of cryptocurrency or token  $i$  on day  $t$
- $P_{i,R(t)}$  is the Underlying Component Closing Price representing the USD price of cryptocurrency or token  $i$  on the Rebalancing Date preceding  $t$
- $w_{Final,i,RD(t)}$  is the Final Weight of Selected Underlying Component  $i$  of each index, on the last Rebalancing Determination Date preceding  $t$
- $\text{Index}_t$  is the Index price level on  $t$
- $\text{Index}_{R(t)}$  is the Index price level on  $R(t)$

### 5.3 Rounding of Data

The following rounding of data are used for indices calculation and publication:

- Underlying Component Closing Prices are the official prices published by Compass
- Weights are rounded to six decimal places
- Index levels are rounded to four decimal places

### 5.4 Calculation Frequency and Dissemination

The CoinShares Compass Basket Indices are computed and published on every Business Day at 4:20pm London Time.

Indices levels are published on the Compass Financial Technologies website ([www.compass-ft.com](http://www.compass-ft.com)) and on the CoinShares Group website ([www.coinshares.com](http://www.coinshares.com)) and are distributed to Bloomberg and Refinitiv.

## 5.5 Hard Fork policy

### Hard fork policy

A hard fork occurs when a change is made to the transaction validation rules of a crypto asset's underlying blockchain protocol in a way that is not compatible with its earlier version. Nodes that wish to continue to participate are expected to upgrade to the new version of the protocol's software. Usually such a fork is planned and accepted by the overwhelming majority of nodes. However, where the fork is contentious enough that a non-negligible number of nodes continue to run the old version of the software, a chain split occurs.

The Steering Committee will evaluate all upcoming hard forks. The treatment of hard forks will be led by decisions of exchanges with respect to the ticker symbols used to represent the resulting crypto assets and the markets that they maintain. Concretely, suppose some crypto asset traded under ticker COIN is expected to undergo a hard fork resulting in an original chain Chain with crypto asset C and a modified chain Chain' with crypto asset C'. There are a few scenarios to consider:

- C continues to trade under ticker symbol COIN while C' starts trading under a newly-created ticker symbol COIN'. In this case, C continues as a constituent of the Index. C' is not eligible to become a constituent of the Index (as it does not have enough price history) and does not contribute to the Index value. C' may be sold by stakeholders tracking the Index as an excess return; the precise decision of when (or whether) to sell will be a matter of judgment for the tracking investment products.
- C' trades under ticker symbol COIN while C starts trading under a new ticker symbol COIN'. In this case, C' replaces C as a constituent of the Index. The pricing history for C' is taken as being that of C prior to the fork. C is no longer a constituent of the Index, does not contribute to the Index value and may be sold by stakeholders tracking the Index as an excess return.
- There is significant disagreement amongst exchanges as to the ticker symbols that C' and C should trade under. It is expected that this situation would apply to Index constituents only in very rare circumstances. In this case, an extraordinary meeting of the Steering Committee will be organized in order to decide on an appropriate course of action which may include replacing C by the next eligible crypto asset or rebalancing across the remaining constituent crypto assets.

### Airdrop policy

An "airdrop" occurs when a blockchain project distributes free crypto assets to investors in the hopes of attracting more people to use their platform. Requirements to qualify for an airdrop may vary; in some cases the participant has to hold the crypto asset in their wallet while other times they have to promote the project on an online forum. Indices do not incorporate potential airdrop values in their computation process. Stakeholders tracking Indices may sell valuable airdrops at their earliest convenience, thus contributing to deliver excess returns over the base Index.

### Staking

A staking reward is granted to holders of a crypto asset when they lock up that asset as collateral to secure fairness when validating transactions or other network actions. Staking rewards require agency on the part of crypto asset holders and also introduce liquidity restrictions since the act of staking includes locking up coins for a period of time. Indices do not incorporate the value of staking rewards in their computation process. Stakeholders tracking Indices may use the value of the resulting staking to deliver excess returns over the base Index.

## 5.6 Market Disruption Adjustments

A Market Disruption event occurs when the trading activity of an Index constituent is disrupted or the fair determination of its price is obstructed. Such scenarios take place when:

- An Index constituent is not open for trading on the specific day on all eligible exchanges

- All eligible exchanges suspend their trading for an Index constituent at a time prior to the Index published closing time with no prior notice on

The occurrence of a Market Disruption Event is determined by the Steering Committee.

If a Market Disruption Event occurs during a rebalancing date, the constituents involved are not rebalanced and their respective weights are equal to those they had on the first business day preceding the Market Disruption Event. The rebalancing period for the involved constituents will be postponed until the next available business day upon which no Market Disruption Event occurs them.

If a Market Disruption Event occurs on any other date, the affected weights are calculated as expressed in 4:

$$w_{Final,i}(t) = \begin{cases} w_{i,WFD(t)} & \text{if } R_i(t) = R(t) \\ w_{i,R(t)} \times \frac{P_{i,R(t)} \times \text{Index}_{R(R(t))}}{P_{i,R(R(t))} \times \text{Index}_{R(t)}} & \text{if } R_i(t) < R(t) \end{cases} \quad (4)$$

Where,

- $WFD(t)$  is the Weight Fixing Date with respect to date  $t$ , i.e. the first weekday preceding or equal to the 4th calendar day before the end of the month
- $w_{Final,i,WFD(t)}$  is the weight of asset  $i$  on date  $t$ , determined on  $WFD(t)$
- $R(t)$  is the most recent index Rebalancing Date preceding  $t$
- $R(R(t))$  is the second most recent index Rebalancing Date preceding  $t$
- $R_i(t)$  is with respect to constituent  $i$  and date  $t$ , the first calculation date equal to or following  $R(t)$ , but strictly preceding date  $t$  on which the constituent  $i$  is unaffected by a Market Disruption Event. If such a date does not exist,  $R_i(t)$  is the first date equal to or following  $R(R(t))$  but strictly preceding date  $t$  on which on which the constituent  $i$  is unaffected by a Market Disruption Event
- $P_{i,t}$  is the price of constituent  $i$  at date  $t$
- $\text{Index}_t$  is the index value at date  $t$

If a Market Disruption Event has been impacting the Index computation for 10 consecutive Index Business Days the Committee governing the Index may adjust the Index Methodology to preserve the economic characteristics of the Index.

## 5.7 Exceptional Circumstances

In exceptional circumstances, the Steering Committee governing the Indices may trigger an exceptional rebalancing to adjust the composition of any of them if it considers that some of the Selected Underlying Components do break one or more of the requirements defined in Section 3.2.

The *CCRI* methodology outlines management of extraordinary circumstances where data used in the *CCRI* computation is delayed or missing. In the event of failure to retrieve the official closing prices for the Underlying Components, the Steering Committee will do its best effort to determine relevant Underlying Component prices from alternative providers that are readily available.

## 6 Index Governance

### 6.1 Index Administrator

Compass Financial Technologies (France) is the Administrator of the Index ("the Index Administrator"). The Index Administrator is responsible for the day-to-day management of the Index and is also responsible for decisions regarding the interpretation of these rules.

### 6.2 Index Calculation Agent

Compass Financial Technologies is the Calculation Agent of the Compass Crypto Family Indices. It is responsible for the day-to-day management of Indices computation according to this methodology.

### 6.3 Index Committees – Supervisor

Compass Financial Technologies has established governance functions to review and provide challenges on all aspects of the Indices determination process. Governance functions are managed by the Compass Oversight Committee and by the CoinShares Compass Basket Indices Steering Committee.

#### **Compass Oversight Committee:**

The Compass Oversight Committee oversees all areas of the benchmark determination processes. It is responsible for supervising and controlling the Index operations team on all Compass Indices. It is also responsible for:

1. Periodic review of incidents
2. Making final decisions in case the Index operations team are not capable or allowed to take decisions
3. Defining and implementing organisation procedures for the Index operations team
4. Defining and overseeing measures that allow for mitigation of operational risks
5. Supervising internal or external audit results
6. The implementation and supervision of the potential codes of conduct that have to be implemented

The Committee is comprised of senior representatives of Compass Financial Technologies and external industry experts.

#### **CoinShares Compass Basket Indices Steering Committee (the Steering Committee):**

The CoinShares Compass Basket Indices Steering Committee is responsible for:

1. Determining the calculation methodology and the rules governing the publication of the CoinShares Compass Basket Indices
2. Making periodic reviews of the CoinShares Compass Basket Indices to validate the robustness of the methodology and to analyse the impact of methodology changes
3. Organising consultation with Indices stakeholders if necessary
4. Ensuring that Indices offer a reliable and representative view of the market they are supposed to represent



The CoinShares Compass Basket Indices Steering Committee is composed of members from Compass and from other entities. The Committee may include individuals or representatives of companies, academics, external counsels, or market participants.

The CoinShares Compass Basket Indices Steering Committee assembles once a year in November. However, at the request of a member of the committee, the Committee may meet on any other day of the year to discuss potential “market emergency” and “force majeure” events or any other situation, which makes an extraordinary meeting necessary.

All Committee decisions will be published without delay following the Committee decision.

The CoinShares Compass Basket Indices Steering Committee members as of July 2023 are:

- Max Shannon, CoinShares
- Pierre Porthaux, CoinShares
- Romain Barrot, CoinShares
- Edouard Mouton, Compass Financial Technologies
- Guillaume Le Fur, Compass Financial Technologies

As of July 2023, Romain Barrot chairs the Steering Committee.

Notwithstanding the eligible criteria in Section 3.2, the CoinShares Compass Basket Indices Steering Committee reserves the right to further exclude any assets based on one or more factors, including but not limited to, its review of general reputational, fraud, manipulation, or security concerns connected to the asset.

#### **6.4 Cases Not Covered in Rules**

In certain cases which are not covered by these rules, operational adjustments will take place in respect of the aim of the Indices. Operational adjustments may also take place if, in the opinion of the Index Administrator, it is desirable to do so to maintain a fair and orderly market in derivatives on these Indices and/or this is in the best interests of the investors in products based on these Indices and/or the proper functioning of the markets. The Index Administrator will report to the Supervisor if it took a decision about a case which is not specifically covered in the rules for comments and review.

## 7 Methodology Changes - Maintenance

This 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 these Indices are compiled or calculated or affect these Indices in another way.

In the absence of exceptional circumstances affecting the Indices calculation or methodology, this Methodology is reviewed annually. The review will include, inter alia, the following points:

1. Verify if the methodology and computation are still in line with the original purpose of the Indices
2. Make sure the quality and quantity of the input data remain sufficient

Changes made to this methodology are published after the review date and implemented on a reasonable time horizon.

Compass Financial Technologies may terminate any of the CoinShares Compass Basket Indices due to certain extraordinary market circumstances.

Changes or termination will be subject to the review and approval of the Steering Committee which will receive all the information related to the change or termination. In case of material changes, a notice will be provided at least two weeks in advance.

The results of the Steering Committee meetings will be published in a press release on Compass Financial Technologies website and distributed timely to data vendors and major news sources.

## 8 Expert Judgment

The CoinShares Compass Basket Indices are based on written and transparent rules and procedures with the purpose of minimising as much as possible the exercise of discretion and expert judgment.

The CoinShares Compass Basket Indices are built from input data that is not interpolated, extrapolated or adjusted. In case of lack of data, the last available data is employed.

Nevertheless, the exercise of expert judgment may become necessary in case of errors and Index restatements, delayed and missing data, hard forks, airdrops, or unexpected situations arising from market stress.

In the event that expert judgment is exercised, this will be done by resorting to the written procedures reported in the methodology and by communicating the decisions taken to the Steering Committee and the Internal Compliance Function in order to prevent conflicts of interest and to protect the integrity and the independence of the Indices determinations. In addition, the interest of the Indices users and the market integrity will be taken into account.

## 9 Errors and Recalculations

Even though the process of each Index calculation is completely automated and pre-defined, an error can be discovered after the publication of the Indices.

In case of a material error, the Indices will be redetermined, and the Indices clients will be notified about the error and the date of the publication of the redetermined Indices. An error is considered material on the basis of its size, the dates of its discovery and of its occurrence, and the impact of the Indices redetermination on the users. The discovery of any error is reported to Steering Committee.

In the case where a material error is discovered and the Administrator recognises a manipulation or an attempted manipulation of any of the Indices' level or the input data, it will be reported to the regulator.

## 10 Potential Limitations

The issues presented in the following non-exhaustive list may limit the ability of some of the Indices to represent the market they are intended to measure, the ease of replication by investors, and more generally the usefulness of the Indices to users.

- All the markets these Indices are meant to measure are volatile. In particular, cryptocurrencies may be subject to much more market movements than traditional asset classes such as stocks and bonds as a consequence of illiquidity, market trends and changes to market structure.
- The input data providers may fail to provide accurate and timely data.
- Cryptocurrency prices are derived from several trading venues, each of which is characterised by a different market structure and the price of a cryptocurrency may sometimes be different across different trading venues. In addition, cryptocurrency exchanges may suffer problems that usually do not affect regulated asset exchanges, such as distributed denial-of-service, trading halt, hacking of private keys, lack of standards comparable to those of regulated exchanges, rapidly evolving technology and uncertain legal frameworks. Finally, the publication of the Indices may cease. Should this occur, the regulation regarding user transitions will be followed, but the existence of a suitable substitute is not assured.

## 11 Cases not covered in rules

In cases which are not expressly covered in these rules, operational adjustments will take place along the lines of the aim of every index of the CoinShares Compass Basket Indices family. Operational adjustments may also take place if, in the opinion of the Index Administrator, it is desirable to do so to maintain a fair and orderly market in derivatives on these Indices and/or this is in the best interests of the investors in products based on these Indices and/or the proper functioning of the markets. The Index Administrator will report to the Supervisor if it took a decision about a case which is not specifically covered in the rules for comments and review.

## 12 Liability

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## Appendix - List of CoinShares Compass Basket Indices

CoinShares Compass Basket Indices			
Index	Compass API Code	Bloomberg Code	Refinitiv Code
CoinShares-Compass Top 10 Crypto Market Index	COINTEN	COINTEN	.COINTEN
CoinShares-Compass Smart Contract Platform Index	COINSMRT	COINSMRT	.COINSMRT

Table 2: CoinShares Compass Basket Indices - Publication Codes

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