

MEMORANDUM

TO: File No. SR-CboeBZX-2019-004

FROM: David Remus
Office of Market Supervision, Division of Trading and Markets

DATE: May 20, 2019

SUBJECT: Meeting with MV Index Solutions

On May 17, 2019, Brett Redfearn, Christian Sabella, Andrea Orr, David Shillman, Michael Coe, Edward Cho, David Remus, Lauren Yates, and Neel Maitra from the Division of Trading and Markets; Valerie Szczepanik from the Division of Corporation Finance; David Lisitza from the Office of the General Counsel; and Igor Kozhanov from the Division of Economic and Risk Analysis, held a conference call with the following individuals:

Thomas Kettner, Managing Director, MV Index Solutions
Gabor Gurbacs, Director, Digital Asset Strategy, MV Index Solutions

The discussion concerned the MVIS Bitcoin U.S. OTC Spot Index and Cboe BZX Exchange, Inc.'s proposed rule change to list and trade shares of the VanEck SolidX Bitcoin Trust. MV Index Solutions also provided the attached presentation to the Commission Staff.

MV Index Solutions (MVIS)

MVIS Bitcoin U.S. OTC Spot Index (MVBTCO)

Discussion Reference Materials

May 2019

For discussion purposes only.

OTC Index Specifications Short Summary

- Index Description: The MVIS Bitcoin OTC Index is designed to track the performance of Bitcoin in the U.S. OTC market. There is no component other than Bitcoin in the index.
- Identifiers: Ticker: MVBTCO, Bloomberg: MVBTCO Index, Reuters: .MVBTCO, ISIN: DE000SLA56F5, SEDOL:BG1G1G1, WKN: SLA56F)
- Constituent OTC platforms: Circle, DRW's Cumberland, Genesis Trading
- Index Type: mid-price time series based on firm/tradable bid-ask quotes. Minimum trade size to record: USD 250,000K
- Calculation: Real-time
- Calculation window: Daily between 00:00 and 24:00 (CET)
- Close: The closing value for MVBTCO is 16:00:00 ET with fixed 16:00:00 ET exchange rates
- Dissemination frequency: index values are disseminated to data vendors every 15 seconds
- Dissemination currency: The index is disseminated in USD
- Base index date: 10/31/2018
- Hard fork treatment: No for this particular price index (unless a fork takes over the dominant chain)
- Use: Exchange traded products, hedge funds and other applicable instruments, research

OTC Index Specifications from Rulebook

4.8 MVIS® Bitcoin US OTC Spot Index

The MVIS Bitcoin US OTC Index is designed to track the performance of a Bitcoin in the US OTC markets as defined in section 2.1. There is no component other than Bitcoin in the index.

In case of a hard fork, which results in several active lines, rule 5.2.2 applies.

In the unlikely event a spun-off coin is larger than Bitcoin (by market capitalisation) and is in general accepted as the successor of the original chain, the index owner might decide to keep it as the only index component.

The index is calculated daily between 00:00 and 24:00 (ET) and the index values are disseminated to data vendors every 15 seconds. The index is disseminated in USD and the closing value is calculated at 16:00:00 ET with fixed 16:00 ET exchange rates.

As the index represents a spot price only, there is no rebalancing and its divisor is 1. Coin supply is not considered in the index calculation.

The MVIS Bitcoin US OTC Spot Index has the following identifiers:

Index Type	ISIN	SEDOL	WKN	Bloomberg	Reuters
Price Return Index	DE000SLA56F5	BG1G1G1	SLA56F	MVBTCO	.MVBTCO

The index was launched on 20 November 2018 with a base index value of 6303.84 as of 31 October 2018.

2 Index Universe

2.1 Index Universe

The index universe includes all Bitcoin prices traded on the following OTC platforms:

- Circle,
- DRW (Cumberland),
- Genesis.

Additional platforms can be added by decision of the index owner.

3 General Definitions

3.1 Pricing Source

For the Bitcoin price at each platform, values are calculated as the midpoint between the latest available real-time bid- and ask-prices.

The consolidated Bitcoin price is derived from the price provided by each platform, equally weighted.

3.2 Index Dissemination

The indices are calculated with the constituent prices converted to USD. Dissemination is in USD. The closing values for all indices are calculated at 16:00:00 ET with fixed 16:00 exchange rates.

OTC Index Calculation from Rulebook

6 Calculation

6.1 Index Formula

The indices are calculated using the Laspeyres' formula:

$$\text{Index Value} = \frac{\sum_{i=1}^n P_i}{D}$$

Where (for all platforms (i) in the Index):

- P_i = price,
- D = divisor/number of platforms.

6.2 Input Data

The following rounding procedures are used for the index calculation:

- Rounding to 2 decimal places:
 - index values,
- Rounding to 18 decimal places:
 - prices (p_i),

OTC Index Contributor Selection Criteria from Rulebook

5.6 Contributor Selection

The following requirements shall apply with regard to the input data used for the management and provision of an Index and the relevant input data providers ("Contributors"):

- the input data shall be sufficient to represent accurately and reliably the market or economic reality that the benchmark is intended to measure;
- the input data shall be transaction data, if available and appropriate. If transaction data is not sufficient or is not appropriate to represent accurately and reliably the market or economic reality that the index is intended to measure, input data which is not transaction data may be used, including estimated prices, quotes and committed quotes, or other values;
- the input data shall be verifiable;
- clear guidelines regarding the types of input data, the priority of use of the different types of input data and the exercise of expert judgement, to ensure compliance with the Index Guide and Index methodology and the aforementioned requirements are defined in the Code of Conduct for Contributors; and
- where an Index is based on input data from Contributors, MVIS will obtain, where appropriate, the input data from a reliable and representative panel or sample of Contributors so as to ensure that the resulting index is reliable and representative of the market or economic reality that the index is intended to measure.

In order to control the quality of contributors, MVIS will conduct the following controls:

- Evaluate market share, reputation, quality and cost of possible input data sources and providers before selecting them on the basis of the gathered information and data;
- Compare the input data of one Contributor with the input data from one or more other Contributors in order to ensure the integrity and accuracy of the input data and in case of bad quality replace a Contributor with another Contributor.

MVIS will not use input data from a contributor if it has any indication that the contributor does not adhere to its Code of Conduct for contributors and in such a case shall obtain representative publicly available data.

The Institutional OTC Market

Based on discussions with OTC bitcoin market participants, the OTC bitcoin market has approximately:

- 1000+ participants, with 50+ active participants daily
- 3 active market makers in the US, 7 active globally
- Approximately 250-350 trades a day
- Average OTC trade size \$250K (\$500K at the largest desk)
- Minimum OTC trade size \$75K
- Largest daily trades in the \$5M-\$30M range
- Spreads on a 10M dollar trade are somewhere between 50bps to a 100bps, depending on market conditions. If participant has days to trade flow (say until settlement) then impact is lower
- Over the counter trading enables better arbitrage mechanisms and results, thereby potentially increases liquidity in the bitcoin markets

OTC Trading Desk have Market Standard Onboarding Documentation Requirements

Institutional Investor/Basic Document Requirements

- Certificate of Incorporation
- Articles of Organization and any other applicable charter documentation
- Documents proving physical address and other contract information
- Documents reflecting ownership, control & organizational structure of the entity
- Copy of passport for each person authorized to trade
- BSA/AML/KYC program
- Source of funds/wealth, for example, a pay stub, bank statements (personal & business), copy of last year's federal tax return ages and tax statement (W-2 and/ or 1099), statements from crypto exchanges, crypto holding records

Hedge funds/funds (in addition to institutional investor requirement)

- Prospectus, Offering Memorandum, or Private Placement Memorandum
- Proof of Registration for the Fund Manager

Trusts (in addition to institutional investor requirement)

- Trust agreement

Money Service Business (in addition to institutional investor requirement)

- FinCEN registration as an MSB (US)

Notable OTC Trading Desks Facts

- Transactions are principal to principal
- Entities are broker dealers or affiliates of broker dealers
- Market standards trading infrastructure
- Physical and procedural safeguards that keep customer and digital asset information safe from unauthorized access or use
- Institutional grade transaction data reporting to clients
- Settlement standards subject to standard banking hours with settlement summaries provided for every transaction.
- Dedicated relationship management/product support with counterparties.
- 24/7 services across multiple global regions
- Incorporated and headquartered in the United States

MVIS an Established and Regulated Index Provider

- Established in 2011 by VanEck
- Objective of capturing important investment opportunities that were being missed by traditional indices
- Introduction of blue chip indices with investability characteristics specifically designed to underlie exchange-traded products (ETPs)
- Approximately \$13B passively managed to MVIS indices
- IOSCO compliant, registration under EU benchmark regulation (highest regulatory guidance for indexing available globally today) in progress
- MVIS indices are built on three key factors:
 - pure-play exposure
 - component liquidity
 - index diversification

In combination, these factors ensure an intelligent index design, tailor-made for ETPs

MVIS manages 88 Indices among several asset classes:

- 38 Country Indices
- 20 Digital Asset Indices
- 10 Hard Asset Indices
- 10 Sector Indices
- 9 Bond Indices

Tabb Crypto Assets Survey (most trade OTC)

What is your main method for transacting in crypto assets today?

	Total	Crypto-assets	
		Currently Investing	Currently Not Investing
Base : All Respondents	75	45	30
In the OTC markets, e.g. via a liquidity provider	33%	42%	20%
Bi-laterally, peer to peer	3%	2%	3%
On crypto centralized exchanges	45%	40%	53%
On crypto decentralized exchanges	11%	9%	13%
Derived products on traditional exchanges	3%	-	7%
Derived products OTC	5%	7%	3%
Sigma	100%	100%	100%

	Total	Crypto-assets	
		Currently Investing	Currently Not Investing
	75	45	30
	25	19	6
	2	1	1
	34	18	16
	8	4	4
	2	-	2
	4	3	1
	75	45	30

Source: Tabb Group Survey for the report: <https://research.tabbgroup.com/report/v16-013-crypto-trading-platforms-target-institutional-market/>

Important Disclosure

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