



INDEX GUIDE

SEBA CRYPTO ASSET SELECT INDEX

VERSION 1.5 | 01.2023

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1 INTRODUCTION

1 Introduction

In accordance with Art. 13 No. 1 (a) of Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 (the “Benchmark Regulation”), this document provides the rules for establishing, calculating and maintaining the SEBA Crypto Asset Select Index (“SEBAX”).

1.1 Objective of Index

The SEBA Crypto Asset Select Index, SEBAX (“The Index”), is a risk-optimized benchmark for the crypto asset market with a focus on safety, technical reliability and tradability.

The objective of SEBAX is to provide an investable index for the most secure, reliable and tradable crypto assets. The selection of the constituents is monitored on an ongoing basis. The index applies advanced techniques to reduce concentration into single constituents and to deliver enhanced diversification.

1.2 About SEBA Bank AG

SEBA Bank AG is the “Index Owner”. The Index Owner makes no warranties or representations as to the accuracy and/or completeness of the Index and does not guarantee the results obtained by persons using the Index in connection with trading funds or securities. The Index Owner makes no representations regarding the advisability of investing in any fund or security. The Index Owner reserves the right to suggest changes to the rules in this index guide at any time. The Index Owner also reserves the right to suggest, in exceptional cases or in temporary situations, exception changes to the rules in this index guide.

The Index is the property of SEBA Bank AG. The Index Owner has selected an index administrator (MarketVector Indexes GmbH) to maintain the index and to act as the responsible index administrator according to the Benchmark Regulation. SEBA Bank AG will be presented in the Index Advisory Committee for the Index and make recommendations as outlined above.

The use of the index in connection with any financial products or for benchmarking purposes requires a license. Please contact SEBA Bank AG for more details.

1.3 About MarketVector Indexes GmbH

MVIS® is a registered trademark of Van Eck Associates Corporation and therefore protected globally against unlawful usage. MarketVector Indexes has selected an index calculation agent to calculate the index.

1.4 Approval of Index Methodologies

MarketVector Indexes and the Index Owner have established the Index and its methodology covered in this Index Guide. A detailed written “Procedure for Index Development” describes the steps and approvals required to develop, document and approve an Index and its methodology. The intention of the Procedure for Index Development is to ensure that the methodology of an Index meets the requirements of Art. 12 of the Benchmark Regulation and is approved and implemented according to a robust and reliable process. The methodology for the index and its methodology covered in this Index Guide has been analysed by the Index Administrator’s Index Operations department in order to ensure that it is robust and reliable, has clear rules on use of discretion, allows sustainable validation (based on reasonable back testing) and is traceable and verifiable. Furthermore, the size, liquidity and transparency of the underlying market for each methodology has been tested and particular circumstances for each relevant market have been taken into account.

1 INTRODUCTION

Each index methodology and the related detailed analysis was presented by the Index Operations Department to the Independent Oversight Function for its approval. Based on the aforementioned approval process and its documentation each Index Methodology was presented to the Management Board (Geschäftsführer) of the Index Administrator for final approval.

1.5 Review of this Index Guide

According to Art. 13 No. 1 (b) of the Benchmark Regulation, the Index Administrator reviews this Index Guide on an annual basis and immediately in case of special circumstances that require a review. The review takes place in meetings attended by the Independent Oversight Function, the Management Board of the Index Administrator and the Index Advisory Committee. If changes to this Index Guide are considered necessary, the process described in Section 4.7 applies.

2 GENERAL DEFINITIONS

2 General Definitions

2.1 Index Dissemination and Identifiers

The index is calculated with the constituent prices converted to USD, on a daily basis between 00:00 and 24:00 (CET/CEST). Dissemination is in USD. Real-time index values are calculated with the latest available prices from the eligible exchanges each 15 seconds. The closing value is calculated on 15 minutes TWAP price at 16:00:00 CET/CEST (using data between 15:45-16:00 CET/CEST) with the corresponding exchange rates.

The SEBA Crypto Asset Select Index has the following identifiers:

Index Type	ISIN	SEDOL	WKN	Bloomberg	Reuters
Price Return Index	DE000SLA8JR1	BKDMF18	SLA8JR	SEBAX	.SEBAX

The index was launched on 4 July 2019 with a base index value of 10.00 as of 30 November 2015.

2.2 Review Schedule

The index composition is rebalanced monthly (the “Monthly Rebalance Date”).

The reviews/rebalancing for the Index are based on the opening data (adjusted for reviewed circulating supply) on the fourth from the last business day in that month. If a security does not trade on a business day, then the last available price for this security will be used.

A “business day” means any day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments in Frankfurt.

Adjustments to constituents will be announced four business days prior to the first business day of the next month at 23:00 CET/CEST.

The Index is rebalanced at 16:00:00 CET/CEST of the last business day in each month.

2.3 Pricing Source

For each component pricing is calculated using a custom eligible exchange subset of the CCCAGG Price Index by CCData (<https://ccdata.io>). CCCAGG is a weighted average of the latest available trading price at each exchange. The component closing price value is calculated using 15 minutes TWAP exchange aggregated price on a second granularity basis, where the exchange aggregated price is the price across eligible exchanges using 24 hour volume weighting. The most liquid currency pair is used for pricing. Values are not backadjusted.

The approved exchanges for the Index are determined by MarketVector Indexes. The list of exchanges is available from MarketVector Indexes or Index Owner on request. The Index Advisory Committee will review the list of exchanges on a monthly basis and may propose to add or delete exchanges from the list of exchanges. Exchanges may be excluded if they are not licensed to be added to an index.

3 MONTHLY REVIEW

3 Monthly Review

3.1 Index Universe

The index universe includes all crypto currencies traded on the exchanges covered by the CCCAGG pricing provided by CC Data Ltd. ("CCData").

3.2 Eligible Index Universe

The components of the SEBA Crypto Asset Select Index, SEBAX are screened in accordance with the custodian specifications applicable to the client and the approvals by the relevant stock exchanges. The index does not include crypto assets that are not accepted by the Swiss Stock Exchange (SIX), Euronext and Deutsche Börse AG as an underlying.

Crypto assets have to meet specific criteria to be eligible for the Index. These criteria are:

- The crypto asset ranks within the top 50 crypto assets by market capitalization (based on circulating supply).
- Stable coins and privacy coins are excluded.
- Crypto assets with less 90 days of pricing history are excluded.
- Crypto assets that are not listed on any of the eligible exchanges are excluded.
- Crypto assets that do not pass the Index criteria related to technical maturity and safety are excluded. These include factors such as the degree of blockchain network decentralization, main-net stability, quality of development team, community involvement etc. of the underlying blockchain.

3.3 Index Selection

Index components are selected on a monthly basis. A maximum of 15 crypto assets ranked by market capitalization are selected for inclusion into the index.

1. The assets and tokens fulfilling the universe criteria above are ranked by their market capitalization in descending order.
2. The top 8 crypto assets - if available - qualify for selection.
3. The remaining 7 components are selected from the highest ranked remaining index components ranked between 9 and 18.
4. The index comprises of a minimum of 5 crypto assets. In case less than 5 assets are eligible, additional assets are flagged eligible by MarketVector Indexes' decision until the number of eligible coins equals the minimum component count.

Backcasting has been based on the components at the time of the launch of the index. The crypto assets were added to the index once they fulfilled the eligibility criteria as described in Section 3.2. However, the historical backcast does not consider whether all index components were listed in at least one of the eligible exchanges. The table below summarises the index composition up to the launch.

3 MONTHLY REVIEW

Period	Index Components
01.12.2015 - 31.10.2016	BTC, LTC, XLM, ETH
01.11.2016 - Launch	BTC, LTC, XLM, ETH, ETC

For the historical backcast pricing is calculated using 15 minutes TWAP price based on all exchanges eligible for the CCCAGG Price Index.

3.4 Weighting Scheme

The index uses cap- and floor-factors to guarantee diversification and avoid over-/underweighting. Index weightings are reviewed on a monthly basis. The weight of each crypto asset in the index is a function of its market capitalization and risk.

Market Capitalization Weights:

The market capitalization weight of each asset is calculated as:

$$w_{mcap_i} = \frac{m_i}{\sum_{i=1}^N m_i}$$

Where:

- w_{mcap_i} = market capitalization weight,
- m_i = average market capitalization of a crypto asset over the 1-month period prior to the Rebalancing Day in USD,
- N = number of constituents in the Index.

Risk Parity Weights:

This is a methodology to allocate capital based on risk. It allocates the weights by equalizing the risk contribution of each coin and minimizing the overall risk without considering their expected returns. The formalization of risk parity is:

$$\begin{aligned} & \text{Minimize } w_{rp}' \sum w_{rp} \\ & \text{subject to } r_1 w_{rp_1} = r_2 w_{rp_2} = r_3 w_{rp_3} = \dots \\ & w_{rp_1} + w_{rp_2} + w_{rp_3} + \dots = 1 \end{aligned}$$

Where:

- w_{rp} = risk parity weights vector,
- \sum = covariance matrix; estimated over the past 3 months prior to the Rebalancing Day,
- r = risk contribution vector equal to $w_{rp}' \sum$.

Final Weights:

Market capitalization weights and risk parity weights are combined for final weight allocation:

$$w_i = a * w_{mcap_i} + (1 - a) * w_{rp_i}$$

Where:

- $a = 0.5$.

3 MONTHLY REVIEW

Capping & Flooring:

The index uses an algorithm that applies a capping rule and flooring rule. Capping ensures diversification while flooring ensures that each component has a meaningful contribution to the index. The capping rule is applied prior to the flooring rule.

Capping: The maximum weight for any constituent is 50%. Additionally, if a constituent has a 3 month average daily volume across eligible exchanges < USD 7.5 million, its weight will be capped to 3%. If a constituent exceeds the maximum weight, the weight will be reduced to the maximum weight and the excess weight shall be redistributed proportionally across all other index components. This process is repeated until no constituents have weights exceeding the respective maximum weight.

Flooring: The minimum weight (floor) for any constituent is 3%. Constituents with weights below 3% will be floored to 3%. The sum of the shortfall weights will be reduced proportionally from the remaining crypto assets except from the coins that were capped. This process is repeated until no constituents have weights less than 3%.

In the unlikely case the weights do not sum up to 100% after all caps and floors were applied, this rule is relaxed by the Index Administrator's decision.

For capping for the backcasted history the 3 month average daily volume threshold has not been applied.

4 ONGOING MAINTENANCE

4 Ongoing Maintenance

4.1 Changes in Circulating Supply

Changes in the circulating supply will not be adjusted during the month, but with the next monthly review.

4.2 Changes due to Forks

A hard fork occurs when a blockchain protocol is changed, such that it may become incompatible with older versions. In effect, participants taking part in transactions on the old blockchain must upgrade to the new one in order to continue validating transactions. However, participants that do not upgrade may continue to support and validate transactions on the older blockchain protocol separately. The result of this is that a blockchain splits into two - hence the name 'hard fork'. If there are nodes permanently supporting the new chain, then the two chains will co-exist. Users that once held digital assets on an older blockchain before the protocol change at a pre-specified blockchain length will now also hold an amount of new coins on the altered blockchain. This new asset has essentially been derived from an older coin as well as its associated blockchain's transaction history.

If a forked asset will be included in the Index, an announcement will be made on the Sponsor website 1 business day prior indicating that the fork meets the established criteria. Unless such an announcement is made informing the market of participation, the newly forked asset should be considered ineligible. Given the nature of forks and the frequency of forks of the Index Universe, neither MarketVector Indexes nor the Sponsor expect to assess every fork event. Only fork events deemed material will be considered for evaluation, which include the following criteria:

- Have a reliable wallet solution with a qualified custodian.
- Other factors such as community interest and information on supply of forked coins.
- Forked assets must be forked from a current component,
- Should be supported by the eligible exchanges.

The assessment of whether to include a forked asset or not is made based on a set of criteria 1 business day prior to the fork day. The newly forked asset may meet the eligibility criteria in Section (3.2) at a later date. This change in status does not constitute a reversal of the previous assessment.

Supported forks will be held as part of the index until the following rebalance. Prior to the rebalance, the index may contain more than 8 elements. At the time of rebalancing, the full eligibility criteria (3.2), index selection criteria (3.3) and weighting scheme (3.4) will be applied. This may result in the removal of the asset from the index allocation.

This rule also applies to soft forks which result in 2 different assets.

4.3 Changes to Pricing

In case an exchange is added to the eligible exchanges subset of the CCCAGG or removed from it, the index divisor will not be adjusted.

4 ONGOING MAINTENANCE

4.4 Trade Suspensions and Market Distortions

There are certain circumstances which might require extraordinary adjustments to the Index. MarketVector Indexes decides whether a market distortion or trade suspension has occurred and about its treatment in the index. The Index Advisory Committee will be consulted if extraordinary adjustments to the Index might be required. These circumstances include, but are not limited to:

- Longer or recurring outages of an exchange,
- Misconduct of an exchange or with a crypto asset or token has been noticed,
- Sharp decline in trading volumes of certain crypto assets or tokens, certain exchanges or even larger areas of the crypto market in general,
- Implementation of investment restrictions for international investors in certain countries or for certain exchanges,
- A crypto asset or token does not trade any more permanently or for an extended period of time.

4.5 Index Corrections

Index corrections distinguish between calculation errors and incorrect input data.

- Calculation errors detected within a trading day are corrected immediately. Intraday tick data are not corrected retrospectively.
- Calculation errors that are older or based on erroneous input data are corrected if technically possible and economically viable. If significant differences exist, index values can also be corrected retrospectively.

4.6 Review of Index Concept

Due to a very dynamic market of crypto assets and tokens the index methodology, parameters and thresholds will be reviewed at least once a year. Market participants feedback is being considered in the process whether or not to make amendments to the methodology and the data sourcing process. Any changes will be communicated by SEBA Bank AG and MarketVector Indexes with a 30-day lead time to enable customers to adjust their processes.

4.7 Changes to the Index Guide

Any changes to the Index Guide will be reviewed by the Index Advisory Committee and approved by MarketVector Indexes' Legal and Compliance Department. Legal and Compliance may also request a conclusive description and further information on any change and may consult the operations department on such changes. The key elements to be analysed in this phase of the change process are robustness, transparency, reliability and integrity. The result of the review will be communicated to the operations department. The email will be archived by the operations department.

In case of changes that might immediately change the composition of an index or must be considered material for any other reason also need to be approved by the Independent Oversight Function ("IOF") prior to their publication and implementation.

In case of material changes an advance notice will be published and provided to users. MarketVector Indexes will generally disseminate a notification related to an Index Guide change 30 days prior to the

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change. A shorter period of time may be applied at MarketVector Indexes' discretion if the relevant index has not been licensed for a financial product to a third party. The notice will describe a clear time frame that gives the opportunity to analyse and comment upon the impact of such proposed material change. Any material comments received in relation to the Index Guide change and MarketVector Indexes' response to those comments will be made publicly accessible after any consultation, except where confidentiality has been requested by the originator of the comments.

4.8 Discretion regarding the Use of Input Data

Pursuant to Art. 12 No.1. (b), MarketVector Indexes has established the following rules identifying how and when discretion may be exercised in the administration of an index.

In case input data are or appear to be qualitatively inferior or different sources provide different data, or a situation is not covered by the index rules, MarketVector Indexes may use or change the data at its own discretion according to the following discretion policy after a plausibility check. This may include:

- Liquidity and size data,
- Event information,
- Other secondary data.

Any changes to input data that MarketVector Indexes intends to apply because of missing data, different data from different sources or other information concluding the inappropriateness or incorrectness of data must subject to reasonable discretion. The decision on any change must be required, appropriate, commensurable and in line with the respective index scope and objective and must reasonably consider in a balance weight the interest of Users, investors in related products and the integrity of the market.

Index operations ensures consistency in the use of discretion in its judgement and decision. Employees involved in the operations team must have shown the respective experience and skills. Significant decisions are subject to sign-off by a supervisor. In case of material changes to data the relevant situation will be analysed in detail, described and presented to the IOF and discussed and reviewed with the IOF.

The broad range of possible data quality problems does not allow to define specific steps for each possible instance. MarketVector Indexes will always weight the different interest of the index users, the integrity of the market and other involved parties and determine the least disadvantageous measure that equally considers the relevant interests best.

In order to avoid individual decisions on the use of data in similar cases for the future an update of the index rules can be taken into consideration if applicable. Other possible mitigation measures are the change of input data sources or providers and/or own data research where possible and reasonable.

Records are kept about material judgement or discretion by MarketVector Indexes and will include the reasoning for said judgement or discretion.

4.9 Input Data and Contributor Selection

According to the input data requirements under Art. 11 of the Benchmark Regulation, the following 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;

4 ONGOING MAINTENANCE

- 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, MarketVector Indexes 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, MarketVector Indexes 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.

MarketVector Indexes 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.

5 CALCULATION

5 Calculation

5.1 Index Formula

The index value is calculated using the Laspeyres' formula:

$$Index\ Value = \frac{\sum_{i=1}^n p_i * q_i * cf_i * fx_i}{D} = \frac{\bar{M}}{D}$$

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

- p_i = price,
- q_i = circulating supply,
- cf_i = weighting cap/floor factor (if applicable, otherwise set to 1),
- fx_i = exchange rate (price currency of component to USD),
- \bar{M} = unit market capitalization of the index (capped/floored),
- D = divisor.

5.2 Input Data

The following rounding procedures are used for the index calculation:

- Rounding to 2 decimal places:
 - index values,
- Rounding to 6 decimal places:
 - divisors (D),
- Rounding to 18 decimal places:
 - prices (p_i),
 - exchange rates (fx_i), usually the most liquid currency the token trades in,
 - weighting cap/floor factors (cf_i).

5.3 Divisor Adjustments

Index maintenance - reflecting changes in circulating supply, events, addition or deletion of tokens to the Index - should not change the level of the index. This is accomplished with an adjustment to the divisor. Any change to the tokens in the index that alters the total market value of the index while holding token prices constant will require a divisor adjustment.

$$Divisor_{new} = Divisor_{old} * \frac{\sum_{i=1}^n p_i * q_i * cf_i * fx_i \pm \Delta MC}{\sum_{i=1}^n p_i * q_i * cf_i * fx_i}$$

ΔMC = Difference between closing and adjusted closing unit market capitalization of the index.

5 CALCULATION

5.4 Data Correction and Disruptions

MarketVector Indexes will usually receive information about errors or disruption from calculation agent, index owner, client, internal systems (IT) or by monitoring the respective output.

Incorrect or missing input data will be corrected immediately:

- The error is immediately communicated to the calculation agent, if applicable.
- Calculation agent will be asked to investigate the reason for the error.
- An email will be sent to all affected clients to inform them about the error; this includes the reason for the issue and an estimate on when the issue will be solved.
- MarketVector Indexes recalculates missing EOD data points and disseminates to vendors and clients.

In case of a material error,

- Legal and Compliance to check the relevant agreements for liability of the calculation agent.
- If MarketVector Indexes identifies any conduct that may involve manipulation or attempted manipulation of an index by calculation agent it will report this to the regulator.
- Where possible and economically reasonable MarketVector Indexes will try to use another calculation agent.

Investigations and communication regarding disruptions with calculation agents will be handled by Compliance and Senior Management. They are either caused by disruptions in calculation or dissemination, which might affect different servicers.

- The disruption is immediately communicated to the calculation/dissemination agent, if applicable.
- Calculation/dissemination agent will be asked to investigate the reason for the disruption.
- An email will be sent to all affected clients to inform them about the disruption; this includes the reason for the issue and an estimate on when the issue will be solved.
- MarketVector Indexes prompts calculation agent to make all efforts to restart index calculation.
- MarketVector Indexes prompts Dissemination agent to make all efforts to restart index dissemination.
- MarketVector Indexes recalculates missing EOD data points and disseminates to vendors and clients.
- Legal and Compliance to check the relevant agreements for liability of the calculation/dissemination agent.
- If MarketVector Indexes identifies any conduct that may involve manipulation or attempted manipulation of an index by calculation/dissemination agent it will report this to BaFin.
- Where possible and economically reasonable MarketVector Indexes will try to use another calculation and/or dissemination agent.

6 APPENDIX

6 Appendix

6.1 Changes to the Index Guide

Date	IG Version	Change
11 October 2019	1.1	New weighting scheme
26 March 2020	1.2	Maximum daily volume for 3% floor changed to USD 10 million
4 August 2020	1.3	Maximum daily volume for 3% floor changed to USD 7.5 million, clarification of pricing
13 April 2022	1.4	Clarification in accordance with the custodian specifications
31 January 2023	1.5	Change in the number of coins in the eligible universe. Change in the max number of component and buffers for selection.

7 DISCLAIMER

7 Disclaimer

MarketVector Indexes™ has contracted with CC Data Limited to maintain and calculate the Index. CC Data Limited uses its best efforts to ensure that the Index is calculated correctly subject to the accuracy of any data that has been provided to it by third parties. Irrespective of its obligations towards MarketVector Indexes GmbH, CC Data Limited has no obligation to point out errors in the Index to third parties. In particular, MarketVector Indexes™ is not responsible for the Licensee and/or for Licensee's legality or suitability and/or for Licensee's business offerings. Offerings by Licensee are not sponsored, endorsed, sold, or promoted by MarketVector Indexes™, Van Eck Associates Corporation as its parent company or its affiliates (collectively, "VanEck"), and MarketVector Indexes™ and VanEck make no representation regarding the advisability of investing in Licensee and/or in Licensee's business offerings. MARKETVECTOR INDEXES™, VanEck AND ITS AFFILIATES MAKE NO WARRANTIES AND BEAR NO LIABILITY WITH RESPECT TO LICENSEE.