

INDEX GUIDE

MarketVector™ Brazil Treasury 760 Day Target Duration Index

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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 MarketVector™ Bond Index family which is comprised of MVIS®, MarketVector™ and BlueStar® Indexes (together the “Indexes”). MarketVector Indexes GmbH (the “Index Owner”) makes no warranties or representations as to the accuracy and/or completeness of the Indexes and does not guarantee the results obtained by persons using the Indexes 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 update the rules in this Index Guide at any time. The Index Owner also reserves the right to make, in exceptional cases or in temporary situations, exceptions to the rules in this Index Guide. The Indexes are the property of MarketVector Indexes GmbH. The Index Owner has selected an index calculator to calculate the Indexes. MVIS® and Bluestar® are registered trademarks of Van Eck Associates Corporation and therefore protected globally against unlawful usage. The use of Indexes from the MarketVector Index family in connection with any financial products or for benchmarking purposes requires a license. Please contact MarketVector Indexes GmbH for more details.

1.1 Approval of Index Methodologies

The Index Owner has established the Indexes and their individual 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 each index and its methodology covered in this Index Guide has been analysed by the Index Owner’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.

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 Owner for final approval.

1.2 Review of this Index Guide

According to Art. 13 No. 1 (b) of the Benchmark Regulation, the Index Owner 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 and the Management Board of the Index Owner. If changes to this Index Guide are considered necessary, the process described in Section 4.2 applies.

2 General Definitions

2.1 Liquidity

Constituents of the indexes must be priced and have sufficient liquidity. In analysing liquidity of securities for inclusion in the indexes, the Index Owner utilizes analytics published by various data providers. Factors to be considered in analysing liquidity may include, but are not limited to, recent trading volume, number of trades, frequency of trades or trading activity of related securities. If there is insufficient trading volume in a constituent or proposed security to obtain accurate pricing during the immediately preceding month, the security in question will be removed at the next monthly rebalancing. Liquidity will be tested monthly and rebalancing will occur on each Monthly Rebalancing Date (except in the event of an Event Driven Rebalancing).

2.2 Coupon Payments

The total return gross indexes (TR) include all coupon payments (on a gross basis). No tax is deducted.

2.3 Review Schedule

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

The review is based on the (adjusted) closing data on the fifth from the last business day in that month (the “Cutoff Date”). 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 after close of trading.

The Index is rebalanced after closing of the last business day in Brazil in each month.

The Index Owner can, in exceptional cases, add securities to the index and also remove securities from the index.

2.4 Dissemination

The end-of-day index values are calculated and disseminated at the end of each Trading Day. The index is disseminated on days when at least one of the index components of the index is available for trading.

2.5 Pricing Source

Bond prices are sourced from ICE Data Services, LLC.

2.6 Index Currency

The index is calculated with the constituent prices converted to BRL, if necessary. Dissemination is in BRL. Currency pricing is as of 4pm EST with fixed 16:00 London time exchange rates from WM company (please see Reuters page WMRSPOT01 or Bloomberg pages WMCO).

3 Index

The following section defines all relevant index parameters, this includes

- Universe: eligible securities,
- Review: selection and weightings,
- Dissemination: times, currencies and identifiers.

3.1 MarketVector® Brazil Treasury 760 Day Target Duration Index

The MarketVector® Brazil Treasury 760 Day Target Duration Index is designed to track the performance of floating rate and inflation-linked Brazilian Sovereign Bonds.

Instrument Types and Eligibility

Letras Financeiras do Tesouro (“LFT”) and Notas do Tesouro Nacional Series B (“NTN-B”) issued by the National Treasury of Brazil are eligible for this index. Additionally, bonds must meet the following criteria:

- The bonds that are currently not included in the index must have at least 12 months of remaining time to maturity.
- The bonds that are already in the index must have at least 6 months of remaining time to maturity.

Component Selection

The index is reconstituted monthly according to the following procedure:

1. All LFTs in the eligible universe are included in the index.
2. NTN-B with the longest remaining time to maturity is included in the index.

Weighting Methodology

The index uses the following weighting methodology:

1. The weight of the selected NTN-B is determined by dividing 760 by the bond’s modified duration in days.
2. The remaining weight is distributed to the selected LFTs in proportion to their market value.

The MarketVector® Brazil Treasury 760 Day Target Duration Index is calculated as a total return gross index and has the following identifiers:

Index Type	ISIN	SEDOL	WKN	Bloomberg	Reuters
Total Return Gross index	DE000SLOEL70		SLOEL7	MVLFTB	.MVLFTB

The index was launched on 29 August 2024 with a base index value of 1000.00 as of 31 December 2015.

The index is calculated by Solactive AG.

4 Ongoing Maintenance

“Event Driven Rebalancing” will only occur following an event which changes the principal amount outstanding (e.g., due to a partial redemption by the issuer, a call or similar event) or changes the pay-out or other fundamental characteristics of the securities, such as a default, including as a result of a bankruptcy or similar event affecting the issuer or a third party guarantor. The Index Owner will consider a security to be in default if it is rated “D” by any one of the three rating agencies mentioned above. An “Event Driven Rebalancing” may result in the removal of a non-compliant security, or portion thereof, and/or a re-weighting of the index. The Index Owner is responsible for determining if an Event Driven Rebalancing has occurred.

4.1 Special Events - MVLFTB

- For Full Tender, Early Redemption or Full Call, the bond will be treated as cash in all calculations. For the avoidance of doubt a tender must be mandatory, the pure offer to tender a bond will not lead to an adaption of the index.
- A Partial Tender or Partial Redemption will be considered by treating the redemption amount as cash that will be reinvested into the index on the effective redemption date. The bond will still be included in the index. but with a smaller amount outstanding (i.e. a smaller weight) regardless of whether the remaining amount outstanding satisfies the amount outstanding requirements. This bond will then be reviewed for eligibility at the next monthly review.
- Partial Redemptions or Partial Calls that are not scheduled partial redemptions will not be considered in the index until the next rebalancing, taking into account a smaller amount outstanding.
- Distressed Debt Exchange Offers: in case more than 90% of the Amount Outstanding is exchanged in a Distressed Debt Exchange with the new bond having different characteristics (maturity, coupon or Amount Outstanding) or trading at a substantially different price, the old bond will be redeemed at the latest available price with the proceeds held as “Paid Cash” and reinvested into the index on the following rebalancing day.
- If a bond is identified as trading flat, i.e. the issuer is not able to meet his interest rates payment obligations, then accrued interest and coupons will be set to 0 in the return calculation.
- A debt increase will not be taken into account until the next monthly review.
- If the rating of a bond is set to D from one rating agency, the bond will be kept in the index until the next monthly review.
- In Other Material Events, the Index Owner will review all material changes made to constituents in order to determine whether the constituent continues to satisfy eligibility criteria. In the event of a possible or pending bankruptcy, conservatorship or similar event involving the issuer, the parent of the issuer or the guarantor of the constituent, the Index Owner may, but is not required to remove such constituent. Upon a bankruptcy filing of an issuer, the parent of the issuer or the guarantor of the constituent, the Index Owner may remove the constituent of such issuer at the time of such event even if the security continues to satisfy reporting and other eligibility criteria. In addition, the Index Owner may, but is not required to, remove the constituent upon the occurrence of a material event that could adversely impact the tax treatment to a US tax payer holder or the ability of the index calculator to value the security. For example, to the extent that an issuer of a security is merged with another entity and that merger would result in an adverse change to the holders, the Index Owner may, but would not be required to, remove the security at the next rebalancing, even though the security continues to satisfy reporting and other eligibility criteria.

4.2 Changes to the Index Guide

Any changes to the Index Guide will be reviewed and approved by the 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 the 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 change. A shorter period of time may be applied at MarketVector Indexes’ discretion if the 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.

4.3 Discretion regarding the Use of Input Data and Extraordinary Events

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

- Liquidity and size data,
- Country, sector, issuer and type classification,
- Event information,
- Coupons and other secondary data.

Regarding extraordinary events, this may include:

- Trading stops,
- Regulatory actions,
- Detection of fraud,
- Etc.

Any changes must subject to reasonable discretion. The decision on any change must be required, appropriate, commensurable and in line with the 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.

4 ONGOING MAINTENANCE

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.

4.4 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 the 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 the 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 - MVLFTB

The index is calculated as

$$Index_t = Index_{t-1} \cdot \left(1 + \sum_{i=1}^n TR_{i,t} \cdot W_{i,t-1} \right)$$

with

- $Index_t$: Index value at time (t),
- $TR_{i,t}$: total return calculated for bond (i) at time (t),
- $W_{i,t}$: Index weight of bond (i) at time (t),
- n : Number of bonds in index.

For total return and index weight, the following relationship hold:

$$TR_{i,t} = \left(\frac{(P_{i,t} + AI_{i,t} + Cash_{i,t} + CP_{i,t}^{adj}) \cdot SF_{i,t} \cdot IR_{i,t} \cdot FX_{i,t}}{(P_{i,t-1} + AI_{i,t-1} + CP_{i,t-1}^{adj}) \cdot IR_{i,t-1} \cdot FX_{i,t-1}} \right) - 1$$

$$W_{i,t-1} = \frac{(P_{i,t-1} + AI_{i,t-1}) \cdot SF_{i,t-1} \cdot Amt_{i,R} \cdot CF_{i,R} \cdot FX_{i,t-1} \cdot IR_{i,t-1}}{\sum_{i=1}^n ((P_{i,t-1} + AI_{i,t-1}) \cdot SF_{i,t-1} \cdot Amt_{i,R} \cdot CF_{i,R} \cdot FX_{i,t-1} \cdot IR_{i,t-1})}$$

with

- $P_{i,t}$: 4pm EST price of bond (i) at time (t),
- $AI_{i,t}$: Accrued interest of bond (i) at time (t),
- $Cash_{i,t}$: Cash payment of bond (i) at time (t),
- $CP_{i,t}^{adj}$: Negative accruals (ex-coupon period) of bond (i) at time (t),
- $SF_{i,t}$: Sink factor of bond (i) at time (t),
- $IR_{i,t}$: Inflation ratio of bond (i) at time (t),
- $FX_{i,t}$: Exchange rate of bond (i) at time (t),
- $Amt_{i,R}$: Amount outstanding of bond (i) at time (R),
- $CF_{i,R}$: Capping factor of bond (i) at time (R),
- R : previous rebalancing date.

5 CALCULATION

5.2 Input Data

The following rounding procedures are used for the index calculation:

- Rounding to 2 decimal places:
 - index values.

All other parameters are not rounded.

5.3 Data Correction and Disruptions

MarketVector Indexes will usually receive information about errors or disruption from calculation agent, 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 the index by calculation agent it will report this to the regulator.
- Where possible and economically reasonable MarketVector Indexes will try 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 the index by calculation/dissemination agent it will report this to BaFin.
- Where possible and economically reasonable MarketVector Indexes will try use another calculation and/or dissemination agent.

6 Appendix

6.1 Changes to the Index Guide

This table contains all changes to the Index Guide after 1 January 2018, when the European Benchmark Regulation became effective.

Date	IG Version	Change
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7 Disclaimer

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