

**S&P Dow Jones  
Indices**

A Division of **S&P Global**

# **S&P/BMV CORPOTRAC Index Methodology**

October 2018

# Table of Contents

Introduction	3
<b>Index Objective</b>	<b>3</b>
<b>Highlights</b>	<b>3</b>
<b>Collaboration</b>	<b>3</b>
<b>Supporting Documents</b>	<b>3</b>
Eligibility Criteria	4
<b>Eligibility Factors</b>	<b>4</b>
Index Construction	5
<b>Index Calculations</b>	<b>5</b>
<b>Constituent Weightings</b>	<b>5</b>
Index Maintenance	6
<b>Rebalancing</b>	<b>6</b>
<b>Ongoing Maintenance</b>	<b>6</b>
<b>Currency and Currency Hedged Indices</b>	<b>6</b>
<b>Base Dates and History Availability</b>	<b>7</b>
Index Governance	8
<b>Index Committee</b>	<b>8</b>
Index Policy	9
<b>Announcements</b>	<b>9</b>
<b>Holiday Schedule</b>	<b>9</b>
<b>Rebalancing</b>	<b>9</b>
<b>End-of-Day Calculation</b>	<b>9</b>
<b>Recalculation Policy</b>	<b>9</b>
<b>Contact Information</b>	<b>9</b>
Index Dissemination	10
<b>Tickers</b>	<b>10</b>
<b>Index Data</b>	<b>10</b>
<b>Web site</b>	<b>10</b>
Appendix I – Credit Ratings Scale	11

Appendix II – Index Calculations	12
<b>Constituent Return</b>	<b>12</b>
<b>Market Value</b>	<b>12</b>
<b>Additional Weight Factor</b>	<b>12</b>
<b>Index Total Return</b>	<b>13</b>
Appendix III – Methodology Changes	14
Disclaimer	15

# Introduction

## Index Objective

The S&P/BMV CORPOTRAC Index is designed to measure the performance of investment grade Mexican corporate bonds while minimizing credit risk.

## Highlights

Valmer provides daily updated prices for the valuation of financial instruments, as well as comprehensive calculation, reporting, analysis, and risk management associated with these prices. Valmer, founded in 2000, is regulated and supervised by the National Banking and Securities Commission.

## Collaboration

Pursuant to an Index Operation And License Agreement dated May 14, 2015 (the “Agreement”) between S&P Dow Jones Indices LLC (“S&P DJI”) and Bolsa Mexicana de Valores, S.A.B. DE C.V. (“BMV”), as amended, S&P DJI and BMV have agreed to jointly publish and co-brand a family of indices (the “Indices”). The Indices will be co-branded with the S&P/BMV naming convention on November 1, 2016 in conjunction with S&P Dow Jones Indices’ assumption of index calculation and maintenance. Prior to November 1, 2016, the Indices were calculated and maintained by BMV.

## Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein. References throughout the methodology direct the reader to the relevant supporting document for further information on a specific topic. The list of the main supplemental documents for this methodology and the hyperlinks to those documents is as follows:

Supporting Document	URL
S&P Dow Jones Indices’ Fixed Income Policies & Practices Methodology	<a href="#">Fixed Income Policies &amp; Practices</a>
S&P Dow Jones Indices’ Fixed Income Index Mathematics Methodology	<a href="#">Index Mathematics Methodology</a>

This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

# Eligibility Criteria

## Eligibility Factors

**Currency.** Bonds must be issued in Mexican pesos.

**Issuer.** Bonds must be corporate securities issued by Mexican companies.

**Market of Issue.** Eligible bonds include those issued in the Mexican market.

**Maturity.** Each bond must have a maturity greater than 360 days and less than 3600 days from the rebalancing reference date. No bonds mature in the index.

**Size.** A minimum par amount outstanding of MXN 200 million at each rebalancing is required.

**Coupon Types.** The following coupon types are eligible:

- Fixed amortizing bonds
- Fixed rate bonds
- Floating rate notes
- Floating amortizing bonds

**Exclusions.** The following bond types are specifically excluded from the index:

- Zero coupon bonds
- Bank issuances (except for MBS)
- Inflation-linked bonds
- Asset Backed Securities issued by a Trust (e.g. Tradeable Certificates “Certificados Bursatiles” as defined in the Mexican Exchange Act “Ley del Mercado de Valores” Art. 62-II)

**Ratings.** Bonds must be rated by at least two ratings agencies (S&P, Moody’s, Fitch, and/or H.R. Ratings). The minimum credit rating for index inclusion is A-/A3/A-/A-, with the lowest rating used for index eligibility purposes.

- **New Issues.** New issues are considered at the next rebalancing.
- **Non-rated and Defaulted Bonds.** Bonds that are no longer rated by at least two ratings agencies or have defaulted are removed at the next rebalancing.

*Please refer to Appendix I for each rating agency’s credit rating scale.*

**Pricing.** Bid Prices provided by Valmer.

# Index Construction

## Index Calculations

The index is modified market value weighted.

The total return is calculated by aggregating the interest return, reflecting the return due to paid and accrued interest, and price return, reflecting the gains or losses due to changes in the end-of-day price and principal repayments.

*For further details regarding index calculations please refer to Appendix II and S&P Dow Jones Indices' Fixed Income Index Mathematics Methodology.*

## Constituent Weightings

At each rebalancing, the index is subject to the following weighting criteria:

- **Credit Weighting.** The index is weighted such that securities in a given ratings band make up the following percentages of the index:

Index Ratings Convention <sup>1</sup>	Index Weight
AAA	70%
AA	20%
A	10%

- **Issuer Weighting.** If an individual issuer exceeds 10% of the index weight, a 10% cap is applied for that issuer. The excess weight is redistributed to all uncapped bonds within the same index ratings band on a proportional basis. In the event that there are not enough eligible issuers per ratings band, the target index weight will be maintained and the 10% issuer cap will be relaxed.

In between index rebalancings, constituent weights fluctuate based on changes in market value.

---

<sup>1</sup> Please refer to *Appendix I* for details on which credit ratings are included in a given ratings convention.

# Index Maintenance

## Rebalancing

The index is reviewed and rebalanced monthly as detailed in the table below.

Date	After The Market Close
Rebalancing Date	Last business day of the month ( <i>T</i> )
Announcement Date	<i>T</i> – 3 business days
Reference Date	<i>T</i> – 4 business days

The Index Committee, nevertheless, reserves the right to make adjustments to the index at any time that it believes appropriate.

Additions, deletions and other changes to the index arising from the rebalancing are made provided the security's reference information and pricing are available by designated pricing and data providers on the rebalancing reference date. Changes to the index are published on the announcement date and become effective on the rebalancing date. Information related to the rebalance is obtained and disseminated after the market close.

## Ongoing Maintenance

The index is also reviewed on an ongoing basis to account for the following:

- When an index bond is in default or misses an interest payment, the price reported by the pricing source is used. However, the Index Committee may determine that the bond be removed from the index at a different price and may specify a price of 0.00. The decision of the Index Committee is final.
- If an index bond is no longer priced by the pricing source, the last available price is used. However, the Index Committee may determine that a different price be used. The decision of the Index Committee is final. For clarity, index bonds that are no longer priced by the pricing source fail to meet the pricing eligibility factors and are removed at the next rebalancing date. If the bond is priced for at least one of the five business days prior to the rebalancing reference date, the bond remains in the index. Otherwise, it is removed from the index at the subsequent rebalancing date.

## Currency and Currency Hedged Indices

The index is calculated in Mexican pesos.

Additional currency and currency hedged versions of the index, as well as maturity, sector and rating-based sub-indices may be available. For a list of available sub-indices and tickers, please refer to S&P Dow Jones Indices' Fixed Income Index Directory available at [www.spdji.com](http://www.spdji.com).

*For more information on currency and currency hedged indices, please refer to S&P Dow Jones Indices' Fixed Income Index Mathematics Methodology.*

### Base Dates and History Availability

Index history availability, base date and base value are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P/BMV CORPOTRAC Index	04/02/2009	12/31/2003	12/31/2003	100

# Index Governance

## Index Committee

The S&P/BMV Fixed Income Index Committee maintains the index. Committee members are full-time professionals at S&P Dow Jones Indices and Valmer. Meetings are held semi-annually, but interim meetings may be held whenever deemed appropriate.

The Index Committee oversees the management of the index, including determinations of intra-rebalancing changes to the index, maintenance and inclusion policies, and other matters affecting the maintenance and calculation of the index.

In fulfilling its responsibilities, the Index Committee has full and complete discretion to (i) amend, apply, or exempt the application of index rules and policies as circumstances may require and (ii) add, remove, or by-pass any bond in determining the composition of the index.

The Index Committee may rely on any information or documentation submitted to it or gathered by it that the Index Committee believes to be accurate. The Index Committee reserves the right to reinterpret publicly available information and to make changes to an index based on a new interpretation of that information at its sole discretion. All Index Committee discussions are confidential.

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

*For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Dow Jones Indices' Fixed Income Policies & Practices document.*

# Index Policy

## **Announcements**

Announcements of any relevant information pertaining to the index are made at approximately 05:30 PM New York Time. Press releases are posted on S&P Dow Jones Indices' Web site at [www.spdji.com](http://www.spdji.com).

## **Holiday Schedule**

The index is calculated when the Mexican fixed income markets are open.

*A complete holiday schedule for the year is available at [www.spdji.com](http://www.spdji.com).*

## **Rebalancing**

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

## **End-of-Day Calculation**

Index levels are calculated at the end of each business day, at approximately 07:00 PM Mexico City Time, via S&P Dow Jones Indices' Web site. This may be subject to change.

## **Recalculation Policy**

For information on the recalculation policy, please refer to S&P Dow Jones Indices' Fixed Income Policies & Practices document.

*For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Dow Jones Indices' Fixed Income Policies & Practices document.*

## **Contact Information**

For questions regarding an index, please contact: [index\\_services@spglobal.com](mailto:index_services@spglobal.com).

# Index Dissemination

Index levels are available through S&P Dow Jones Indices' website at [www.spdji.com](http://www.spdji.com), major quote vendors (see codes below), numerous investment-oriented websites, and various print and electronic media.

## Tickers

The table below lists headline indices covered by this document. All currency, currency hedged, maturity, sector and rating-based sub-indices as well as return type versions of the below indices that may exist are also covered by this document. Please contact [index\\_services@spglobal.com](mailto:index_services@spglobal.com) for a complete list of indices covered by this document.

Total Return Index	Ticker
S&P/BMV CORPOTRAC Index	SPVCORT

## Index Data

Daily index level data is available via subscription.

*For product information, please contact S&P Dow Jones Indices, [www.spdji.com/contact-us](http://www.spdji.com/contact-us).*

## Web site

*For further information, please refer to S&P Dow Jones Indices' Web site at [www.spdji.com](http://www.spdji.com).*

## Appendix I – Credit Ratings Scale

The table below shows each rating agency's credit ratings scale, applicable to the index.

<b>S&amp;P</b>	<b>Fitch Ratings</b>	<b>MOODY'S</b>	<b>HR Ratings</b>	<b>Convention</b>
mxAAA	AAA (mex)	Aaa.mx	HR AAA	AAA
mxAA+	AA+ (mex)	Aa1.mx	HR AA+	AA
mxAA	AA (mex)	Aa2.mx	HR AA	AA
mxAA-	AA- (mex)	Aa3.mx	HR AA-	AA
mxA+	A+ (mex)	A1.mx	HR A+	A
mxA	A (mex)	A2.mx	HR A	A
mxA-	A- (mex)	A3.mx	HR A-	A

## Appendix II – Index Calculations

### Constituent Return

The return on a single constituent,  $r_t$ , can be determined as follows:

$$r_t = \left( \frac{PL_t + ID_t + I_{[ID_t=0]}C_t}{PL_{t-1} + ID_{t-1}} \right) \quad (1)$$

where:

$PL_t$  = Clean price of the asset on day  $t$ .

$ID_t$  = Accrued interest on day  $t$ .

$I_t$  = An indicator where if equal to 1, refers to the coupon clipping; Otherwise it is zero.

$C_t$  = Coupon payment on day  $t$ .

### Market Value

The market value of an index security as of the close on day  $t$  is calculated as follows:

$$MV_t = PAR_t * \frac{(PL_t + ID_t)}{100} * FX_t \quad (2)$$

The adjusted market value is determined as follows:

$$AMV_t = AWF * MV_t \quad (3)$$

where:

$MV_t$  = Market value of the index security on day  $t$ .

$AMV_t$  = Adjusted market value of the index security on day  $t$ .

$PAR_t$  = Par amount of the index security as of the last rebalancing.

$FX_t$  = Foreign exchange rate used to convert to the target currency on day  $t$ .

$AWF$  = Additional Weight Factor (see below).

### Additional Weight Factor

The Additional Weight Factor (AWF) is used to tilt the original market value weight of a security within the index. It is calculated on the rebalancing reference date and is implemented on the rebalancing effective date. The AWF remains static until the subsequent rebalancing.

The AWF is calculated as follows:

$$AWF_i = \frac{CW_{i,t}}{W_{i,t}} \times BF_i \quad (4)$$

where:

$BF_i$  = Band Factor of security  $i$ .

$W_{i,t}$  = Uncapped weight of security  $i$  on rebalancing date  $t$  based on the market value of all index constituents.

$CW_{i,t}$  = Capped weight of security  $i$  on rebalancing date  $t$  as determined by the issuer capping rule after notch weighting has occurred.

And,

$$BF_i = BW_i \frac{\sum_1^N MV_t}{\sum_{Band_i} MV_t} \quad (5)$$

where:

$\sum_{Band_i} MV_t$  = Aggregate market value of the all securities in the band corresponding to security  $i$  on rebalancing date  $t$ .

$\sum_1^N MV_t$  = Aggregate market value of all  $N$  securities in the underlying index on rebalancing date  $t$ .

$BW_i$  = Band weight corresponding to security  $i$ .

### Index Total Return

The index total return can be calculated as:

$$R_t = \sum_{i \in \text{Security}} \left( \frac{AMV_{i,t-1}}{\sum_{i \in \text{Security}} (AMV_{i,t-1})} \times r_{i,t} \right) \quad (6)$$

where:

$r_{i,t}$  = Return of security  $i$  on day  $t$ .

$AMV_{i,t-1}$  = Adjusted Market Value of security  $i$  at the close of day  $t-1$ .

The accumulated return is then calculated as:

$$i_t = i_{t-1} \times (1 + r_t) \quad (7)$$

where:

$i_t$  = Index level at day  $t$ .

$i_{t-1}$  = Index level at day  $t-1$ .

$r_t$  = Daily index total return day  $t$ .

The initial index value is set to 100.

*For further details regarding index calculations please refer to S&P Dow Jones Indices' Fixed Income Index Mathematics Methodology.*

## Appendix III – Methodology Changes

Methodology changes since November 1, 2016 are as follows:

<b>Change</b>	<b>Effective Date (After Close)</b>	<b>Previous</b>	<b>Methodology Updated</b>
Size Eligibility Factor	4/30/2018	A minimum market value of MXN 200 million at each rebalancing is required.	A minimum Par Amount Outstanding of MXN 200 million at each rebalancing is required.

# Disclaimer

Copyright © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. STANDARD & POOR'S, S&P, SPDR, S&P 500, S&P EUROPE 350, S&P 100, S&P 1000, S&P COMPOSITE 1500, S&P MIDCAP 400, S&P SMALLCAP 600, GIVI, GLOBAL TITANS, S&P RISK CONTROL INDICES, S&P GLOBAL THEMATIC INDICES, S&P TARGET DATE INDICES, S&P TARGET RISK INDICES, DIVIDEND ARISTOCRATS, STARS, GICS, HOUSINGVIEWS, INDEX ALERT, INDEXOLOGY, MARKET ATTRIBUTES, PRACTICE ESSENTIALS, S&P HEALTHCARE MONITOR, SPICE, and SPIVA are registered trademarks of Standard & Poor's Financial Services LLC, a division of S&P Global ("S&P"). DOW JONES, DJ, DJIA and DOW JONES INDUSTRIAL AVERAGE are registered trademarks of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution, reproduction and/or photocopying in whole or in part are prohibited without written permission. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, Dow Jones, S&P or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. All information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties. Past performance of an index is not a guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other investment product or vehicle. S&P Dow Jones Indices LLC is not a tax advisor. A tax advisor should be consulted to evaluate the impact of any tax-exempt securities on portfolios and the tax consequences of making any particular investment decision. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof ("Content") may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY

**SOFTWARE OR HARDWARE CONFIGURATION.** In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related information and other analyses, including ratings, research and valuations are generally provided by licensors and/or affiliates of S&P Dow Jones Indices, including but not limited to S&P Global's other divisions such as S&P Global Market Intelligence. Any credit-related information and other related analyses and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. Any opinion, analyses and rating acknowledgement decisions are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P Dow Jones Indices does not assume any obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P Dow Jones Indices LLC does not act as a fiduciary or an investment advisor. While S&P Dow Jones Indices has obtained information from sources they believe to be reliable, S&P Dow Jones Indices does not perform an audit or undertake any duty of due diligence or independent verification of any information it receives.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P Global Ratings Services reserves the right to assign, withdraw or suspend such acknowledgement at any time and in its sole discretion. S&P Dow Jones Indices, including S&P Global Ratings Services, disclaim any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgement as well as any liability for any damage alleged to have been suffered on account thereof.

Affiliates of S&P Dow Jones Indices LLC, including S&P Global Ratings Services, may receive compensation for its ratings and certain credit-related analyses, normally from issuers or underwriters of securities or from obligors. Such affiliates of S&P Dow Jones Indices LLC, including S&P Global Ratings Services, reserve the right to disseminate its opinions and analyses. Public ratings and analyses from S&P Global Ratings Services are made available on its Web sites, [www.standardandpoors.com](http://www.standardandpoors.com) (free of charge), and [www.ratingsdirect.com](http://www.ratingsdirect.com) and [www.globalcreditportal.com](http://www.globalcreditportal.com) (subscription), and may be distributed through other means, including via S&P Global Rating Services publications and third-party redistributors. Additional information about our ratings fees is available at [www.standardandpoors.com/usratingsfees](http://www.standardandpoors.com/usratingsfees).

S&P Global keeps certain activities of its various divisions and business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.

BMV and VALMER are trademarks of Bolsa Mexicana de Valores, S.A.B. de C.V. and have been licensed for use by S&P Dow Jones Indices.