# **S&P Dow Jones** Indices

A Division of S&P Global

# S&P Global Sovereign Inflation-Linked Bond Indices *Methodology*

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### Introduction

#### **Index Objective**

The S&P Global Sovereign Inflation-Linked Bond Indices measure the market-value-weighted performance of inflation-linked sovereign debt publicly issued by governments in their domestic markets.

#### **Index Family**

**S&P Global Developed Sovereign Inflation-Linked Bond Index.** The index measures the performance of developed-market inflation-linked sovereign debt.

- S&P Eurozone Sovereign Inflation-Linked Bond Index. The index is a subset of the S&P Global Developed Sovereign Inflation-Linked Bond Index and measures the performance of developed-market Eurozone inflation-linked sovereign debt.
- **S&P U.S. TIPS Index.** The index is a subset of the S&P Global Developed Sovereign Inflation-Linked Bond Index and measures the performance of U.S. inflation-linked sovereign debt.
  - S&P U.S. TIPS 7-10 Year Index. The index is a subset of the S&P U.S. TIPS Index with bonds with between 7-10 years of remaining maturity.
    - S&P U.S. TIPS 7-10 Year Excess Return Index. The index measures the daily return of the S&P U.S. TIPS 7-10 Year Index (USD) minus the daily return of the S&P U.S. Treasury Current 3-Month Bill Index.

**S&P Global Emerging Sovereign Inflation-Linked Bond Index.** The index measures the performance of emerging-market inflation-linked sovereign debt.

- S&P Pacific Alliance Sovereign Inflation-Linked Bond Index. The index is a subset of the S&P Global Emerging Sovereign Inflation-Linked Bond Index and measures the performance of emerging-market inflation-linked sovereign debt in Chile, Colombia, Mexico, and Peru.
- **S&P Andean Sovereign Inflation-Linked Bond Index**. The index is a subset of the S&P Global Emerging Sovereign Inflation-Linked Bond Index and measures the performance of emerging-market inflation-linked sovereign debt in Chile, Colombia, and Peru.

#### **Available Composite Indices**

The structure of the indices is as follows:

S&P Global Developed Sovereign Inflation-Linked Bond Index

- S&P/ASX Government Inflation-Linked Bond Index
- S&P Canada Sovereign Inflation-Linked Bond Index
- S&P Denmark Sovereign Inflation-Linked Bond Index
- S&P Israel Sovereign Inflation-Linked Bond Index
- S&P Japan Sovereign Inflation-Linked Bond Index
- S&P New Zealand Sovereign Inflation-Linked Bond Index
- S&P South Korea Sovereign Inflation-Linked Bond Index
- S&P Sweden Sovereign Inflation-Linked Bond Index

- S&P U.K. Inflation-Linked Gilt Index
- S&P U.S. TIPS Index
- S&P Eurozone Sovereign Inflation-Linked Bond Index
  - S&P France Sovereign Inflation-Linked Bond Index
  - S&P Germany Sovereign Inflation-Linked Bond Index
  - S&P Italy Sovereign Inflation-Linked Bond Index
  - S&P Spain Sovereign Inflation-Linked Bond Index

S&P Global Emerging Sovereign Inflation-Linked Bond Index

- S&P India Sovereign Inflation-Linked Bond Index
- S&P Poland Sovereign Inflation-Linked Bond Index
- S&P South Africa Sovereign Inflation-Linked Bond Index
- S&P Thailand Sovereign Inflation-Linked Bond Index
- S&P Turkey Sovereign Inflation-Linked Bond Index
- S&P/B3 Brazil Sovereign Inflation-Linked Bond Index
- S&P Pacific Alliance Sovereign Inflation-Linked Bond Index
  - S&P/BMV Mexico Sovereign Inflation-Linked Bond Index
  - o S&P Andean Sovereign Inflation-Linked Bond Index
    - S&P Chile Sovereign Inflation-Linked Bond Index
    - S&P Colombia Sovereign Inflation-Linked Bond Index
    - S&P/BVL Peru Sovereign Inflation-Linked Bond Index

For information on the S&P/ASX Government Inflation-Linked Bond Index, please refer to the S&P/ASX Australian Fixed Interest Index Series methodology document available at <a href="https://www.spglobal.com/spdji/">www.spglobal.com/spdji/</a>.

For more information on the S&P/B3 Brazil Sovereign Inflation-Linked Bond Index, please refer to the S&P/B3 Brazil Government Bond Indices methodology document available at <a href="https://www.spglobal.com/spdji/">www.spglobal.com/spdji/</a>.

For information on the S&P/BMV Mexico Sovereign Inflation-Linked Bond Index, please refer to the S&P/BMV Fixed Income Indices Methodology document available at <a href="https://www.spglobal.com/spdji/">www.spglobal.com/spdji/</a>.

#### **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	Fixed Income Policies & Practices
S&P Dow Jones Indices' Fixed Income Index Mathematics Methodology	Index Mathematics Methodology

This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of the indices 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 indices continue to achieve their objective.

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## Eligibility Criteria

#### **Eligibility Factors**

**Countries.** The countries included in the S&P Global Developed Sovereign Inflation-Linked Bond Index are classified by S&P Dow Jones Indices as developed. The countries included in the S&P Global Emerging Sovereign Inflation-Linked Bond Index are classified by S&P Dow Jones Indices as emerging. S&P Dow Jones Indices conducts a rigorous country classification process to evaluate the status of global markets.

For more information on country classification, please refer to the S&P Dow Jones Indices' Fixed Income Policies & Practices Methodology.

Currency. Securities must be issued in the domestic currency of the issuer.

**Maturity.** Each bond must have a maturity greater than one month from the rebalancing date. No bond matures in an index.

**Market of Issue.** Securities must be sovereign debt issued by the central governments and issued in the domestic or Eurobond markets. For the S&P/ASX Government Inflation-Linked Bond Index, the securities must be issued by the Australian government, state governments, territories, or semi-government issuers in the Australian market.

Coupon Type. Only fixed coupon bonds are included in the indices.

**Size.** A minimum one billion (local currency) outstanding at each rebalancing is required for all countries except the following:

Country	Currency	Size
Japan	JPY	100 Billion
Chile	CLF	10 Million
Peru	PEN	100 Million
South Korea	KRW	1 Trillion

For all applicable countries, government holdings are excluded in determining par amount outstanding for index eligibility purposes. Par amounts of index securities are adjusted on the rebalancing date to reflect any changes that have occurred since the previous rebalancing date, due to partial calls, tenders, U.S. Treasury Department secondary market repurchases, etc. Adjustments due to U.S. Government or Federal Reserve holdings are made once per quarter, on the rebalancing date in the first month of the quarter.

Optionality. Bullets, callable and puttable, are included.

**Settlement.** Bonds issued up to the rebalancing reference date (regardless of the settlement date). Standard index settlement convention is same-day (e.g., T+0), unless otherwise specified. For monthends that fall on a weekend, the interest accrued during the month will be reflected within the calendar month, regardless of settlement convention. For rates that are not available at month-end (e.g., a rate with an unknown reset), the accrual will be based on the current rate and adjusted the first business day of the next month.

<sup>&</sup>lt;sup>1</sup> For the S&P/ASX Government Inflation-Linked Bond Index and S&P South Africa 1+ Year Sovereign Inflation-Linked Bond Index, each bond must have a maturity greater than one year from the rebalancing date.

#### **Exclusions**

- Bills
- Floating-rate issues
- STRIPS
- Sukuk

For the S&P U.S. Treasury Current 3-Month Bill Index, government bills are eligible.

**Pricing.** Except for the below indices, the indices use LSEG bid pricing. Bonds not priced by the designated pricing source are ineligible for index inclusion.

- S&P/ASX Government Inflation-Linked Bond Index: uses Tradeweb.
- S&P/BMV Mexico Sovereign Inflation-Linked Bond Index: uses Valmer.

### **Index Construction**

#### **Index Calculations**

The indices are weighted by market value.

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

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

### **Index Maintenance**

#### Rebalancing

Except for the S&P U.S. TIPS 7-10 Year Excess Return, the indices are reviewed and rebalanced on a monthly basis using the schedule in the table below.

• For the S&P U.S. TIPS 7-10 Year Excess Return weights are reset on a daily basis.

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 rebalancing is obtained and disseminated after the close of business.

Rebalancing Schedule				
Rebalance Frequency	Monthly			
Rebalancing Date	Last day of the rebalancing period (T)			
Announcement Date	T minus 3			
Reference Date	T minus 4			

All days reflect after the close and count business days.

#### **Ongoing Maintenance**

For more information on treatment of defaults or lack of daily price data, please refer to the Defaults section of S&P Dow Jones Indices' Fixed Income Policies & Practices Methodology.

#### **Currency of Calculation and Additional Index Return Series**

The aggregate indices are calculated in U.S. dollars and the underlying indices are calculated in their respective local currencies. Certain underlying indices are also available in U.S. dollars as detailed in *Index Dissemination*.

WMR foreign exchange rates are taken daily at 4:00 PM London Time and used in the calculation of the indices. These mid-market fixings are calculated by WMR based on LSEG data and appear on LSEG pages.

Additional currency and currency hedged versions of the indices, 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 <a href="www.spglobal.com/spdji/">www.spglobal.com/spdji/</a>.

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 dates and base values are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P Global Developed Sovereign Inflation-Linked Bond Index	08/01/2014	01/30/1998	01/30/1998	100
S&P Canada Sovereign Inflation-Linked Bond Index	08/01/2014	01/30/1998	01/30/1998	100
S&P Denmark Sovereign Inflation-Linked Bond Index	08/01/2014	05/31/2012	05/31/2012	100

Index	Launch Date	First Value Date	Base Date	Base Value
S&P Israel Sovereign Inflation-Linked Bond Index	08/01/2014	09/29/2006	09/29/2006	100
S&P Japan Sovereign Inflation-Linked Bond Index	08/01/2014	03/31/2004	03/31/2004	100
S&P New Zealand Sovereign Inflation-Linked Bond Index	10/08/2014	12/01/1998	12/01/1998	100
S&P South Korea Sovereign Inflation-Linked Bond Index	08/01/2014	02/27/2009	02/27/2009	100
S&P Sweden Sovereign Inflation-Linked Bond Index	08/01/2014	11/28/2003	11/28/2003	100
S&P U.K. Inflation-Linked Gilt Index	08/01/2014	01/30/1998	01/30/1998	100
S&P U.S. TIPS Index	03/31/2011	12/31/2001	12/31/2001	100
S&P U.S. TIPS 7-10 Year Excess Return Index	10/08/2020	02/28/1997	02/28/1997	100
S&P Eurozone Sovereign Inflation-Linked Bond Index	08/01/2014	10/30/1998	10/30/1998	100
S&P France Sovereign Inflation-Linked Bond Index	08/01/2014	10/30/1998	10/30/1998	100
S&P Germany Sovereign Inflation-Linked Bond Index	08/01/2014	03/31/2006	03/31/2006	100
S&P Italy Sovereign Inflation-Linked Bond Index	08/01/2014	02/28/2005	02/28/2005	100
S&P Spain Sovereign Inflation-Linked Bond Index	08/01/2014	05/30/2014	05/30/2014	100
S&P Global Emerging Sovereign Inflation-Linked Bond Index	03/18/2015	11/01/2001	11/01/2001	100
S&P India Sovereign Inflation-Linked Bond Index	03/18/2015	06/28/2013	06/28/2013	100
S&P Poland Sovereign Inflation-Linked Bond Index	08/20/2014	05/31/2010	05/31/2010	100
S&P South Africa Sovereign Inflation-Linked Bond Index	08/20/2014	11/01/2001	11/01/2001	109
S&P South Africa Sovereign Inflation-Linked 1+ Year Bond Index	08/23/2016	11/01/2001	11/01/2001	109
S&P Thailand Sovereign Inflation-Linked Bond Index	03/18/2015	07/29/2011	07/29/2011	100
S&P Turkey Sovereign Inflation-Linked Bond Index	08/20/2014	02/28/2007	02/28/2007	100
S&P Pacific Alliance Sovereign Inflation-Linked Bond Index	03/18/2015	02/27/2004	02/27/2004	100
S&P Andean Sovereign Inflation-Linked Bond Index	03/18/2015	02/27/2004	02/27/2004	100
S&P Chile Sovereign Inflation-Linked Bond Index	03/18/2015	11/30/2006	11/30/2006	100
S&P Colombia Sovereign Inflation-Linked Bond Index	03/18/2015	02/27/2004	02/27/2004	100
S&P/BVL Peru Sovereign Inflation-Linked Bond Index	03/18/2015	05/30/2008	05/30/2008	100

## Index Governance

#### **Index Committee**

An Index Committee maintains the indices. All committee members are full-time professionals at S&P Dow Jones Indices. Meetings are held regularly.

The Index Committee oversees the management of the indices, including determinations of intrarebalancing changes, maintenance and inclusion policies, and other matters affecting the maintenance and calculation of the indices.

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 an 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 the indices based on a new interpretation of that information at its sole discretion. All Index Committee discussions are confidential.

The Index Committee is separate from and independent of other analytical groups at S&P Global. In particular, the Index Committee has no access to or influence on decisions by S&P Global Ratings analysts.

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 Methodology.

# **Index Policy**

#### **Announcements**

Announcements of any relevant information pertaining to the indices are made after market close. Press releases are posted on the S&P Dow Jones Indices Web site at <a href="https://www.spglobal.com/spdji/">www.spglobal.com/spdji/</a>.

#### **Holiday Schedule**

The indices are calculated on all business days of the year (Monday through Friday) except New Year's Day (January 1st).

For regional and sub-index holiday schedules, a complete holiday schedule for the year is available on S&P Dow Jones Indices' Web site at <a href="https://www.spglobal.com/spdji/">www.spglobal.com/spdji/</a>.

#### 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.

#### **Recalculation Policy**

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

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

#### **Contact Information**

For questions regarding an index, please contact: index\_services@spglobal.com.

### **Index Dissemination**

Index levels are available through S&P Dow Jones Indices' website at <a href="www.spglobal.com/spdji/">www.spglobal.com/spdji/</a>, 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 versions of the below indices that may exist are also covered by this document. Please refer to the <u>S&P DJI Methodology & Regulatory</u> <u>Status Database</u> for a complete list of indices covered by this document.

Total Return Index (Currency)	Ticker
S&P Global Developed Sovereign Inflation-Linked Bond Index (DCR <sup>2</sup> )	SPFIRLIT
S&P Global Developed Sovereign Inflation-Linked Bond Index (USD)	SPFILIUT
S&P Canada Sovereign Inflation-Linked Bond Index (CAD)	SPFICAIT
S&P Denmark Sovereign Inflation-Linked Bond Index (DKK)	SPFIDKIT
S&P Israel Sovereign Inflation-Linked Bond Index (ILS)	SPFIILIT
S&P Japan Sovereign Inflation-Linked Bond Index (JPY)	SPFIJPIT
S&P New Zealand Sovereign Inflation-Linked Bond Index (NZD)	SPFINZIT
S&P South Korea Sovereign Inflation-Linked Bond Index (KRW)	SPFIIKRT
S&P Sweden Sovereign Inflation-Linked Bond Index (SEK)	SPFISEIT
S&P U.K. Inflation-Linked Gilt Index (GBP)	SPFIGBIT
S&P U.S. TIPS Index (USD)	SPBDUSPT
S&P U.S. TIPS 7-10 Year Excess Return Index	SPUP0ERT
S&P Eurozone Sovereign Inflation-Linked Bond Index (EUR)	SPFID4IT
S&P Eurozone Sovereign Inflation-Linked Bond Index (USD)	SPFIDIUT
S&P France Sovereign Inflation-Linked Bond Index (EUR)	SPFIFRIT
S&P Germany Sovereign Inflation-Linked Bond Index (EUR)	SPFIDEIT
S&P Italy Sovereign Inflation-Linked Bond Index (EUR)	SPFIITIT
S&P Spain Sovereign Inflation-Linked Bond Index (EUR)	SPFIIEST
S&P Global Emerging Sovereign Inflation-Linked Bond Index (DCR <sup>2</sup> )	SPFIEMIT
S&P Global Emerging Sovereign Inflation-Linked Bond Index (USD)	SPFIEIUT
S&P India Sovereign Inflation-Linked Bond Index (INR)	SPFIINIT
S&P Poland Sovereign Inflation-Linked Bond Index (PLN)	SPFIPLIT
S&P South Africa Sovereign Inflation-Linked Bond Index (ZAR)	SPFIIZAT
S&P South Africa Sovereign Inflation-Linked 1+ Year Bond Index	SPFIZA1
S&P Thailand Sovereign Inflation-Linked Bond Index (THB)	SPFITHIT
S&P Turkey Sovereign Inflation-Linked Bond Index (TRY)	SPFITRIT
S&P Pacific Alliance Sovereign Inflation-Linked Bond Index (DCR <sup>2</sup> )	SPFIMLPAT
S&P Pacific Alliance Sovereign Inflation-Linked Bond Index (USD)	SPFIMPUT
S&P Andean Sovereign Inflation-Linked Bond Index (DCR²)	SPFIMILAT
S&P Andean Sovereign Inflation-Linked Bond Index (USD)	SPFIMLUT
S&P Chile Sovereign Inflation-Linked Bond Index (CLP)	SPFICLIT
S&P Colombia Sovereign Inflation-Linked Bond Index (COP)	SPFICOIT
S&P/BVL Peru Sovereign Inflation-Linked Bond Index (PEN)	SPFIPEITT

<sup>&</sup>lt;sup>2</sup> Domestic Currency Return.

#### **Index Data**

Daily index level data is available via subscription.

For product information, please contact S&P Dow Jones Indices, <a href="www.spglobal.com/spdji/en/contact-us">www.spglobal.com/spdji/en/contact-us</a>.

#### Web site

For further information, please refer to S&P Dow Jones Indices' Web site at www.spglobal.com/spdji/.

# Appendix I - Methodology Changes

Methodology changes since July 1, 2016, are as follows:

Change	Effective Date			
Change Index Name: S&P/BVL Peru Sovereign Inflation- Linked Bond Index (PEN)	(After Close)	The index name was S&P Peru Sovereign Inflation-Linked Bond Index (PEN).	Updated The index name is S&P/BVL Peru Sovereign Inflation-Linked Bond Index (PEN).	
Index Name: S&P U.S. TIPS Index	10/07/2020	The index name was S&P US Treasury TIPS Index.	The index name is S&P U.S. TIPS Index.	
Index Name:  S&P U.K. Gilt Inflation-Linked Bond Index	7/24/2020	S&P U.K. Gilt Inflation-Linked Bond Index	S&P U.K. Inflation-Linked Gilt Index	
Minimum Par Amount Outstanding: S&P Peru Sovereign Inflation-Linked Bond Index	12/31/2019	A minimum par amount outstanding of PEN 500 million, on the rebalancing reference date, is required for index eligibility.	A minimum par amount outstanding of PEN 100 million, on the rebalancing reference date, is required for index eligibility.	
Exclusion of Government Holdings from Par Amount Outstanding for Index Eligibility Purposes:	06/29/2018	Government holdings are included in determining par amount outstanding for index eligibility purposes.	Government holdings are excluded in determining par amount outstanding for index eligibility purposes, where applicable.	
Stripped Amount:  S&P U.S. TIPS Index	06/30/2016	The par amounts of securities are further adjusted to reflect the amount of "stripped" securities of a given issue during the rebalancing period.	The par amounts of securities are not further adjusted to reflect the amount of "stripped" securities of a given issue during the rebalancing period.	
Pricing Source:  S&P U.S. TIPS Index	6/30/2016	S&P Securities Evaluations (SPSE) <sup>3</sup>	Thomson Reuters	

<sup>&</sup>lt;sup>3</sup> SPSE was the pricing source from May 1, 2012, to June 30, 2016. BG Cantor Market Data was the pricing source prior to this.

### Disclaimer

#### Performance Disclosure/Back-Tested Data

Where applicable, S&P Dow Jones Indices and its index-related affiliates ("S&P DJI") defines various dates to assist our clients by providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P DJI defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Information presented prior to an index's launch date is hypothetical back-tested performance, not actual performance, and is based on the index methodology in effect on the launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Also, the treatment of corporate actions in back-tested performance may differ from treatment for live indices due to limitations in replicating index management decisions. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate certain ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using "Backward Data Assumption" (or pulling back) of ESG data for the calculation of back-tested historical performance. "Backward Data Assumption" is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as "product involvement") were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on "Backward Data Assumption" please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history

will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used. Index returns shown do not represent the results of actual trading of investable assets/securities. S&P DJI maintains the index and calculates the index levels and performance shown or discussed but does not manage any assets.

Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US \$100,000 investment for a 12-month period (or US \$10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US \$1,650), the net return would be 8.35% (or US \$8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US \$5,375, and a cumulative net return of 27.2% (or US \$27,200).

#### **Intellectual Property Notices/Disclaimer**

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