

**iBoxx EUR
Government Inflation-
Linked Euro-Inflation
Short Index
*Methodology***

November 2025

Table of Contents

Markit iBoxx EUR Government Inflation Linked Euro-Inflation Short	3
Index family structure	3
Publication of the Index	3
Bond selection rules	4
Bond type	4
Issuer type	4
Amount outstanding	5
Credit Rating	5
Time to maturity	5
Bond classification	6
Sovereigns	6
Index size, bond ranking and selection	7
Index weighting	7
Bond weighting	7
Index Calculation	8
Static data	8
Bond prices	8
Rebalancing process	8
Index data	8
Index and analytics weights	9
Index Calculus	9
Treatment of the special intra-month events	9
Maturity extension	9
Maturity extension for perpetual bonds without a reset date	9
Maturity extension for perpetuals & dated fixed-to-fixed bonds with a reset date	10
Maturity buckets	10
Clean price index	10
Total return index	10
Unhedged/hedged total return index	10
Index history	10
Settlement conventions	11
Calendar	11

Data publication and access	11
Index review	11
Index Governance	12
Index Committee	12
Changes to Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short	13
Further information	14
Formal complaints	14
Disclaimer	15
Performance Disclosure/Back-Tested Data	15
Intellectual Property Notices/Disclaimer	16
ESG Indices Disclaimer	18

Markit iBoxx EUR Government Inflation Linked Euro-Inflation Short

The Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short is designed to reflect the performance of EUR denominated Euro-inflation-index-linked sovereign debt issued by Eurozone countries with short time-to-maturity. The index rules aim to cover six EUR denominated Euro-inflationlinked bonds with shortest time-to-maturity, whilst upholding minimum amount outstanding criterion. The indices are an integral part of the global iBoxx index families, which provide the marketplace with accurate and objective benchmarks by which to assess the performance of bond markets and investments.

All iBoxx indices are multi-contributor price. Prices for the bonds in the Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short are sourced from a number of leading market makers. The received quotes are subject to a rigorous quality control process which excludes stale or off-market prices, and the remaining quotes that pass the quality control are consolidated to the index price.

Index family structure

The bond selection rules for the index mirror the rules of the Markit iBoxx EUR Government InflationLinked Euro-Inflation Short . In addition, below criteria are applied.

Level0	Level1	Level2	Level3	Level4	Level5	Level6	Level7	Level8
EUR	D	Government	*	*	*	*	*	*

Bonds must be denominated in Euro.

Bonds must be issued by the government of Eurozone countries.

Publication of the Index

Bond and index analytical values are calculated three times each trading day.

- after 12:00 noon London time (Far East close and European midday)
- after 4:15 pm London time (Far East close, European close and North America midday)
- after 9 pm London time (All closing prices)

The indices are calculated every day except on common European bank holidays. In addition, the indices are calculated with the previous trading day's close on the last calendar day of each month if that day is not a trading day. S&P DJI publishes an index calculation calendar which is available at <https://www.spglobal.com/spdji/en/> for registered users. Index data and bond price information is also available from the main information vendors.

Bond and index analytical values are calculated each trading day using the daily closing prices. Closing index values and key statistics are published at the end of each business day at <https://www.spglobal.com/spdji/en/> for registered users.

Bond selection rules

The following selection criteria are used to determine the index constituents:

- Bond type
- Issuer type
- Credit Rating
- Time to maturity
- Amount outstanding
- Bond Classification
- Index Size, Bond Ranking and Selection

Bond type

Only fixed-rate bonds whose cash flow can be determined in advance are eligible for the indices. Zero coupon inflation-linked bonds are also eligible. The indices are comprised solely of EUR-denominated Euro-inflation-index-linked bonds.

The following bonds are specifically excluded:

- Callable bonds
- Puttable bonds
- Retail bonds (for individual investors)
- When issued (WI) bonds
- Extended bonds as defined under section 'Maturity extension' in this document

The coupon and principal of the bond need to be linked to a domestic measure of consumer price inflation. Bonds where only the coupon or only the principal are linked to an inflation-index are ineligible, as are bonds whose coupon and principal are linked to producer price inflation or other non-domestic consumer price inflation indices.

For retail bonds and private placements, publicly available information is not always conclusive and the classification of a bond as a retail bond or a private placement will be made at S&P DJI's discretion based on the information available at the time of determination. Any bond classified as retail or private placement is added to the list of excluded private placements and retail bonds. The list is published at <https://www.spglobal.com/spdji/en/> for future reference and to ensure consistency.

In instances where a new bond type is not specifically ex- or included according to the published index rules, S&P DJI will analyze the features of such securities in line with the principles set out in the Bond type methodology. S&P DJI may consult specific Index Committees. Any decision as to the eligibility or ineligibility of a new bond type will be published and the index rules will be updated accordingly.

Issuer type

Only bonds issued by sovereigns are eligible. Bonds must be issued by Eurozone countries.

Amount outstanding

Bonds require a minimum outstanding par amount of €500 million in order to be eligible for the index.

Credit Rating

All bonds in the indices must have an iBoxx Rating of investment grade. Ratings from the following three credit rating agencies are considered for the calculation of the iBoxx Rating:

- Fitch Ratings
- Moody's Investor Service
- S&P Global Ratings

Investment grade is defined as BBB- or higher from Fitch Ratings and S&P Global Ratings and Baa3 or higher from Moody's Investor Service. Bonds with an RD/SD rating are excluded from the indices. If more than one of the above agencies rates a bond, then the iBoxx rating is the average of the provided ratings. The index consolidates ratings to the nearest rating grade and does not use rating notches.

For more information on average ratings, please refer to the iBoxx Rating Methodology, available at <https://www.spglobal.com/spdji/en/>.

Time to maturity

At each rebalancing effective date, all bonds must have a minimum time to maturity of at least 12 months, calculated from the rebalancing effective date to the expected workout date using the respective bond's day count convention.

For the specific bond types below, the indices determine the bond's expected workout date as follows:

- Plain vanilla bonds: the expected workout date is the final maturity date
- Dated and undated callable financial hybrid capital bonds: the expected workout date is the first call date
- Non-financial hybrid capital bonds with an interest rate reset: the expected workout date is the first reset date
- Soft bullets: the expected workout date is the first call date

Bond classification

All bonds are classified based on the principal activities of the issuer and the main sources of the cash flows used to pay coupons and redemptions. In addition, a bond's specific collateral type or legal provisions are evaluated. Hence, it is possible that bonds issued from different subsidiaries of the same issuer carry different classifications.

The issuer classification is reviewed regularly based on updated information received by S&P DJI, and status changes are included in the indices at the next rebalancing if necessary.

Where the sector classification of a specific entity is not clear due to the diversified business of the entity, a decision is made at S&P DJI's discretion. S&P DJI assigns the classification according to its evaluation of the business risk presented in the security prospectus and annual reports, if available. S&P DJI also compares the classification to peers in the potential sectors. Membership lists including classification are published on the FTP server and in the *Indices* section of the webpage for registered users.

Sovereigns

Bonds issued by a central government of an eligible country and denominated in the currency of that country. Only bonds also linked to an inflation index are eligible.

Index size, bond ranking and selection

The index has a fixed number of bonds. This chapter describes the selection procedure that is applied to determine the bonds selected for the Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short .

• Index Size

The minimum and maximum number of bonds in the index is 6.

• Country Size

For diversification purpose, the maximum number of bonds issued by a single country is 3. If there are less than 6 bonds under this rule, the maximum number of bonds by a single country will be relaxed.

• Bond Ranking

Should more than the maximum number of bonds be available for the index, ordering criteria are applied in order to rank the eligible bonds for the Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short . Bonds with shorter time to maturity will be selected first.

Index weighting

The Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short include the index average, such as average yield, are market-value-weighted with the inflation-adjusted amount outstanding as notional. The exception is the unadjusted total return index which is based on the unadjusted face value of the bonds.

The amount outstanding of a bond is only adjusted during the monthly re-balancing at the end of each month. However, scheduled redemption payments for amortizing bonds and sinking funds are taken into account when they occur, because of the influence they have on index returns and analytical values.

Bond weighting

Bond weights are determined using the inflation-adjusted amount outstanding as notional. Bond weights are based on the market-capitalization of the bond.

Index Calculation

Static data

Information used in the index calculation is sourced from offering circulars and checked against standard data providers.

Bond prices

For more details, please refer to the *iBoxx Pricing Methodology* document, available in the *Methodology* section of the webpage at <https://www.spglobal.com/spdji/en/>.

Rebalancing process

All Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short are rebalanced monthly on the last day of the month. Changes to static data, ratings, amounts outstanding, etc. are only taken into account if they are publicly known three business days before the end of the month. Changes in rating or amount outstanding on the last two trading days of the month are accounted for at the next re-balancing. New bonds issued must settle before the end of the month and all relevant information must be known at least three trading days before the end of the month.

Three business days before the end of each month, a preliminary membership list is published on the FTP server. Two business days before the end of each month, a membership list with the final amounts outstanding for each bond is published. This list contains the constituents for the next month.

On the first business day of each month, S&P DJI publishes the final membership with previous business day's closing prices for bonds, and various bonds analytics based on the index prices of the bonds.

Index data

The calculation of the indices is based on bid prices. New securities are included in the indices at their respective ask prices when they enter the index family. If no price can be established for a particular security, the index continues to be calculated based on the last available price. This might be the case in periods of market stress, or disruption as well as in illiquid or fragmented markets. If the required inputs become impossible to obtain, S&P DJI may consult market participants prior to the next rebalancing date. Decisions are made publicly available on a timely basis and S&P DJI may refer back to previous cases.

A sub-index of the Markit iBoxx Inflation-linked Indices is calculated if at least one bond matches all inclusion criteria. If no more bonds qualify for an index, then its level will remain constant. If at least one bond becomes available again, the index calculation will be resumed and chained to the last calculated level. All bonds are assigned to sub-indices according to their classification. The assignment of a bond to a certain maturity bucket is based on its expected remaining life. All bonds remain in their maturity bucket for the entire month. Calculation occurs three times a day as described in section 1.3. The indices are calculated on each trading day (Monday to Friday), unless this day is a holiday in each of the eligible countries. If the indices are calculated on a day that is a non-business day in one of the countries, then the prices from the previous trading day will be carried forward and the index will be calculated using those prices and the current accrued interest and coupon payment data. For mid-price indices, both the calculation and rebalance of the indices is based on the mid of consolidate bid and ask quotes. All calculations use the most recent prices.

The rebalancing takes place after close of market on the last trading day of a rebalancing month.

Index and analytics weights

The Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short is market-value-weighted, with the bond's amount outstanding as the weighting factor. The amount outstanding of a bond is only adjusted at the monthly rebalancing process at the end of each month. However, scheduled redemption payments for amortizing bonds and sinking funds are taken into account from the date they occur, as they have a significant influence on index return and analytical values. In addition, bonds that are fully redeemed intramonth are also taken into account immediately. Therefore, the indices are based on adjusted amount outstanding, derived from the amount issued and closely related to the amount outstanding of a bond. The concept is summarized below.

Definitions:

- *Amortizing bonds*: Bonds whose face value is redeemed according to a schedule at more than one redemption date. Interest payments are made on the basis of the remaining value of the bond.
- *Sinking funds*: Bonds, for which money is applied periodically to redeem part of the outstanding before maturity. At the redemption dates the appropriate amount of bonds may either be retired randomly from the outstanding bonds, or purchased on the open market and thus retired. Interest payments are made on the remaining outstanding bonds.
- *Fully redeemed bonds*: Bonds that are fully called or completely repurchased prior to or at the calculation date.

The amount issued of a bond does not change when coupons are paid and bonds are redeemed. However, additional tranches and unscheduled repurchases have to be taken into account to arrive at a suitable basis for index and analytics calculations. Therefore the adjusted amount outstanding is the common basis on which all calculations are based.

In addition, incoming bond prices are linked to the amount outstanding, rather than to the amount issued. This ensures a common basis (to the nominal value of 100), on which all bonds are priced and the indices are calculated.

Index Calculus

For specific index formulas please refer to the *iBoxx Bond Index Calculus Methodology* available at [https:// www.spglobal.com/spdji/en/](https://www.spglobal.com/spdji/en/).

Treatment of the special intra-month events

Data for the application of corporate actions in the indices may not be fully or timely available at all times, e.g. the final call prices for make-whole calls or the actual pay-in-kind percentage for PIK-payment options. In such cases, S&P DJI will estimate the approximate value based on the available data at the time of calculation.

Maturity extension

Maturity extension for perpetual bonds without a reset date

Maturity	Coupon/call structure	Workout date at issuance	Updated Workout date if not called
Perpetual	Fixed/ Callable	Assume first call date as workout date	Extend workout date until the assumed next call date - 5 years from first call date*.

*Assumes the terms allow for a redemption at the new assumed maturity date.

Maturity extension for perpetuals & dated fixed-to-fixed bonds with a reset date

Maturity	Coupon/Call structure	Workout Date at issuance	Updated Workout date if not called
Perpetual	Reset*/Callable	Assume first call date as workout date	Extend workout date until the end of the next reset date*
Dated	Reset/Callable	Assume reset date as workout date	Extend workout date until the end of the next reset date or final maturity date*

*Assumes the bond terms allow for a redemption at the new assumed maturity date

Maturity buckets

In order to allow for maturity groupings, all bonds are categorized into maturity buckets. The intervals are defined as 1-5 years, 5-10 years, 5+ years and 10+ years. The assignment of bonds to maturity buckets is based on expected remaining life. The expected remaining life is expressed in years and calculated.

All bonds remain in their maturity bucket for the entire month.

Clean price index

All iBoxx inflation-linked indices are basket indices that analyze relative changes in value compared to the beginning of the respective period. The composition and weightings of the index are adjusted at the beginning of each period. The formula for the calculation of clean price index can be found in the index calculus guide.

Total return index

Two different total return index levels are provided; an adjusted version taking into account the inflation adjustment and an unadjusted version based on unadjusted real market values. The adjusted total return index is more comparable to traditional iBoxx indices, because it takes into account the current relative size of the bonds, i.e. a € 1.0 billion bond issued 10 years ago has a higher weight than a € 1.0 billion bond issued yesterday, because of the past 10 years' inflation. The formulas for the calculation of adjusted and unadjusted total return indices can be found in the index calculus document available on the webpage. The hedged and unhedged indices and all index analytics are calculated for both the adjusted and unadjusted indices.

Unhedged/hedged total return index

The indices are also expressed in hedged and unhedged form in a number of currencies. All inflationlinked indices are calculated in hedged and unhedged versions in the following currencies: EUR, GBP, USD, JPY, CAD, SEK and KRW.

The formulas for the calculation of multi-currency total return index hedged and unhedged can be found in the *Index calculus* document available at <https://www.spglobal.com/spdji/en/>.

Spot and forward rates for index calculation are sourced from WM Reuters three times a day:

- 8:00 am London fixing
- 4:00 pm London fixing
- 9:00 pm London fixing

For each index calculation the most recent spot and forward rates are used.

Index history

The Index history starts on 29 February 2004. The indices has a base value of 100 on that date.

Settlement conventions

All iBoxx indices calculate using the assumption of T+0 settlement days.

Calendar

S&P DJI publishes an index calculation calendar available on <https://www.spglobal.com/spdji/en/> under *iBoxx Indices Calendars*. This calendar provides an overview of the index calculation holidays of the iBoxx bond index families each year.

Data publication and access

The table below summarizes the publication of Markit iBoxx EUR Government Inflation-Linked EuroInflation Short in the *Indices* section of the website for registered users and on the FTP server.

In addition to the indices detailed in this methodology, other indices covered by this document may be available. For a list of available indices, please refer [here](#).

Frequency	File Type	Access
Daily	Underlying file – Bond level	FTP Server
	Indices files – Index level	FTP Server / website / Bloomberg for index levels only
Weekly/T-3/T-2	Preview components	FTP Server / website
Daily from the 6th calendar day of the month (or the next index publication day if the 6th calendar day falls on a nonbusiness day)	Forwards	FTP Server
Monthly	End of month components	FTP Server / website
	XREF files	FTP Server

Table: Index identifiers

Name	Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short			
Version	TRI_Real	CPI_Real	TRI_Nominal	CPI_Nominal
Sedol	BYMW6X6	BYMW6Y7	BYM15N6	BYM15P8
ISIN	GB00BYMW6X68	GB00BYMW6Y75	GB00BYM15N63	GB00BYM15P87
Ticker	IBXXIFS3	IBXXIFS4	IBXXIFS1	IBXXIFS2
RIC	.IBXXIFS3	.IBXXIFS4	.IBXXIFS1	.IBXXIFS2

Index review

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.

Index Governance

Index Committee

An S&P Dow Jones Indices 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 intra-rebalancing 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 more information on index governance policies, please refer [here](#).

Changes to Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short

31 Mar 2025	Annual Index Review 2024 • Update to minimum amount outstanding
01 May 2024	Annual Index Review 2023 • Update to Agencies' Classification Definition > Updated definition of 'Agencies' > Updated definition for 'Other Sub-Sovereigns'
Aug. 31, 2023	Annual Index Review 2022 <ul style="list-style-type: none"> • Treatment of distressed debt exchanges • Maturity extension section added
Feb. 29, 2004	• Launch of the Markit iBoxx EUR Government Inflation-Linked Euro-Inflation Short Index

Further information

Client support

For client support please contact index_services@spglobal.com.

Formal complaints

Formal complaints should be emailed to spdji_compliance@spglobal.com.

Please note: spdji_compliance@spglobal.com should only be used to log formal complaints.

General index inquiries

For general index inquiries, please contact index_services@spglobal.com.

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

© 2025 S&P Dow Jones Indices. All rights reserved. S&P, S&P 500, SPX, SPY, The 500, US500, US 30, S&P 100, S&P COMPOSITE 1500, S&P 400, S&P MIDCAP 400, S&P 600, S&P SMALLCAP 600, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, Select Sector, S&P MAESTRO, S&P PRISM, S&P STRIDE, GICS, SPIVA, SPDR, INDEXOLOGY, iTraxx, iBoxx, ABX, ADBI, CDX, CMBX, MBX, MCDX, PRIMEX, HHPI, and SOVX are registered trademarks of S&P Global, Inc. ("S&P Global") or its affiliates. DOW JONES, DJIA, THE DOW and DOW JONES INDUSTRIAL AVERAGE are 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 or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P DJI does not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P DJI is impersonal and not tailored to the needs of any person, entity, or group of persons. S&P DJI receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P DJI 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 DJI makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P DJI is not an investment advisor, commodity trading advisor, fiduciary, "promoter" (as defined in the Investment Company Act of 1940, as amended) or "expert" as enumerated within 15 U.S.C. § 77k(a), and S&P DJI 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. S&P DJI is not a tax advisor. Inclusion of a security, commodity, crypto currency, or other asset within an index is not a recommendation by S&P DJI to buy, sell, or hold such security, commodity, crypto currency, or other asset, nor is it considered to be investment or trading 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 DJI. The Content shall not be used for any unlawful or unauthorized purposes. S&P DJI 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" "WHERE IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIMS 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 DJI does not act as a fiduciary or an investment advisor. While S&P DJI has obtained information from sources it believes to be reliable, S&P DJI does not perform an audit or undertake independent verification of any information it receives. S&P DJI reserves the right to vary or discontinue any index at any time for regulatory or other reasons. Various factors, including external factors beyond S&P DJI's control might necessitate material changes to indices.

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 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, 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, 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, reserve the right to disseminate its opinions and analyses. Public ratings and analyses from S&P Global Ratings are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription), and may be distributed through other means, including via S&P Global Ratings publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

S&P Global keeps certain activities of its various divisions and business units separate from each other 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 nonpublic 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.

Some indices use the Global Industry Classification Standard (GICS®), which was developed by, and is the exclusive property and a trademark of, S&P Global and MSCI. Neither MSCI, S&P DJI nor any other party involved in making or compiling any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use

thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability, or fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P DJI, any of their affiliates or any third party involved in making or compiling any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

S&P Dow Jones Indices products are governed by the terms and conditions of the agreements under which they may be provided. A license is required from S&P Dow Jones Indices to display, create derivative works of and/or distribute any product or service that uses, is based upon and/or refers to any S&P Dow Jones Indices and/or index data.

ESG Indices Disclaimer

S&P DJI provides indices that seek to select, exclude, and/or weight index constituents based on, but not limited to, certain environmental, social or governance (ESG) indicators, or a combination of those indicators, including the following: environmental indicators (including the efficient use of natural resources, the production of waste, greenhouse gas emissions, or impact on biodiversity); social indicators (such as, inequality and investment in human capital); governance indicators (such as sound management structures, employee relations, remuneration of staff, tax compliance, respect for human rights, anti-corruption and anti-bribery matters), specific sustainability or values-related company involvement indicators (for example, production/distribution of controversial weapons, tobacco products, or thermal coal), or controversies monitoring (including research of media outlets to identify companies involved in ESG-related incidents).

S&P DJI ESG indices use ESG metrics and scores in the selection and/or weighting of index constituents. ESG scores or ratings seek to measure or evaluate a company's, or an asset's, performance with respect to environmental, social and corporate governance issues.

The ESG scores, ratings, and other data used in S&P DJI ESG indices is supplied directly or indirectly by third parties (note these parties can be independent affiliates of S&P Global or unaffiliated entities) so an S&P DJI ESG index's ability to reflect ESG factors depends on these third parties' data accuracy and availability.

ESG scores, ratings, and other data may be reported (meaning that the data is provided as disclosed by companies, or an asset, or as made publicly available), modelled (meaning that the data is derived using a proprietary modelling process with only proxies used in the creation of the data), or reported and modelled (meaning that the data is either a mix of reported and modelled data or is derived from the vendor using reported data /information in a proprietary scoring or determination process).

ESG scores, ratings, and other data, whether from an external and/or internal source, is based on a qualitative and judgmental assessment, especially in the absence of well-defined market standards, and due to the existence of multiple approaches and methodologies to assess ESG factors and considerations. An element of subjectivity and discretion is therefore inherent in any ESG score, rating, or other data and different ESG scoring, rating, and/or data sources may use different ESG assessment or estimation methodologies. Different persons (including ESG data ratings, or scoring providers, index administrators or users) may arrive at different conclusions regarding the sustainability or impact of a particular company, asset, or index.

Where an index uses ESG scores, ratings or other data supplied directly or indirectly by third parties, S&P DJI does not accept responsibility for the accuracy or completeness of such ESG scores, ratings, or data.

No single clear, definitive test or framework (legal, regulatory, or otherwise) exists to determine 'ESG', 'sustainable', 'good governance', 'no adverse environmental, social and/or other impacts', or other equivalently labelled objectives. In the absence of well-defined market standards and due to the existence of multitude approaches, the exercise of judgment is necessary. Accordingly, different persons may classify the same investment, product and/or strategy differently regarding 'ESG', 'sustainable', 'good

governance', 'no adverse environmental, social and/or other impacts', or other equivalently labelled objectives. Furthermore, the legal and/or market position on what constitutes an 'ESG', 'sustainable', 'good governance', 'no adverse environmental, social and/or other impacts', or other equivalently labelled objectives may change over time, especially as further regulatory or industry rules and guidance are issued and the ESG sustainable finance framework becomes more sophisticated.

Prospective users of an S&P DJI ESG Index are encouraged to read the relevant index methodology and related disclosures carefully to determine whether the index is suitable for their potential use case or investment objective.