

**S&P Dow Jones
Indices**

A Division of **S&P Global**

Markit iBoxx USD Liquid Investment Grade Top 30 Index Guide

January 2024

Table of Contents

1	Markit iBoxx USD Liquid Investment Grade Top 30 Index	4
2	Bond selection rules	5
	2.1 Bond type	5
	2.2 Credit rating	6
	2.3 Time to maturity	6
	2.4 Amount outstanding	6
	2.5 Age	6
	2.6 Geographic scope	7
	2.7 Minimum run	7
	2.8 Lockout period	7
	2.9 Index size, issuer ordering and bonds selection	7
	2.9.1 Selection process	7
	2.9.2 Rule precedence	7
3	Bond classification	9
	3.1 Corporates	9
	3.2 Additional classification	10
4	Index calculation	12
	4.1 Static data	12
	4.2 Bond prices	12
	4.3 Rebalancing process	12
	4.3.1 Rebalancing procedure	12
	4.4 Index data	13
	4.5 Index calculus	13
	4.6 Index history	13
	4.7 Settlement conventions	13
	4.8 Calendar	13
	4.9 Publication of the Markit iBoxx USD Liquid Investment Grade Top 30 Index	13
	4.10 Data publication and access	13
	4.11 Index review	14
5	Index Governance	15
6	Changes to the iBoxx USD Liquid Investment Grade Top 30 Index	16
7	Further information	17

1 Markit iBoxx USD Liquid Investment Grade Top 30 Index

The Markit iBoxx USD Liquid Investment Grade Top 30 Index is a basket of 30 bonds, designed to reflect the performance of the most liquid USD denominated investment grade corporate debt. The index offers exposure to the USD investment grade liquid bond universe and has been designed to provide a suitable basis for OTC, exchangetraded derivatives and Exchange Traded Funds (ETFs). The index is an integral part of the global Markit iBoxx index families, which provide the marketplace with accurate and objective benchmarks by which to assess the performance of bond markets and investments.

The Markit iBoxx USD Liquid Investment Grade Top 30 Index is rebalanced quarterly following the close of the market on the last calendar day of February, May, August and November each year and consists of investment grade USD denominated bonds issued by corporate issuers from developed countries and rated by at least one of three rating services: Fitch Ratings, Moody's Investors Service, or Standard & Poor's Rating Services.

All iBoxx indices are priced based on multiple data inputs. The Markit iBoxx USD Index family uses multi-source prices as described in the document "Markit iBoxx Pricing Rules" publicly available on <https://www.spglobal.com/spdji/en/>.

This document covers the index selection rules and calculation methodology.

2 Bond selection rules

The following selection criteria are applied to select the constituents for the Markit iBoxx USD Liquid Investment Grade Top 30 Index:

- Bond type
- Credit rating
- Time to maturity
- Amount outstanding
- Age
- Geographic origin
- Minimum run
- Lockout period

The number of bonds selected for the index is limited to 30. In addition to the selection criteria used to define the eligible bond universe, ranking criteria have been defined to determine which bonds enter the iBoxx USD Liquid Investment Grade Top 30 Index.

2.1 Bond type

Bonds with the following characteristics are included:

- Fixed coupon bonds
- Step-up bonds with coupon schedules known at issuance (or as functions of the issuer's rating)
- Medium-term notes ("MTNs")
- Make-whole callables

The following instrument bond types are specifically excluded from the indices:

- Preferred shares
- Sinking funds
- Convertibles
- Bonds with other equity features attached (e.g., options/warrants)
- Perpetual bonds
- Floating rate notes
- Putables
- Callables
- Retail bonds
- Private placements
- Bonds with differences between accrual and coupon payment periods and monthly-paying bonds
- Extended bonds as defined under section 'Maturity extension' in this document

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 IHS Markit's discretion based on the information available at the time of determination. IHS Markit may consult with the specific Index Advisory Committees to review private placements. Any bond classified as private placement is added to the list of excluded private placements. The list is published on <https://www.spglobal.com/spdji/en/> for future reference and to ensure decision's consistency.

In instances where a new bond type is not specifically excluded or included according to the published index rules, IHS Markit will analyse the features of such securities in line with the principles set out

in 2.1 of this guide. S&P DJI may consult the specific Index Advisory 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.

2.2 Credit rating

All bonds in the Markit iBoxx USD Liquid Investment Grade Top 30 Index 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 Markit iBoxx USD Liquid Investment Grade Top 30 Index.

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 how the average rating is determined, please refer to the *iBoxx Rating Methodology* document available at <https://www.spglobal.com/spdji/en/> under *Methodology*.

2.3 Time to maturity

To qualify for the iBoxx USD Liquid Investment Grade Top 30 Index all eligible bonds must have at least 2 years remaining time to maturity when joining the iBoxx USD Liquid Investment Grade Top 30 Index. The time to maturity is measured according to the same method as in the iBoxx USD Corporates index.

Bonds in the index with maturities less than 2 years will be excluded once they have completed the minimum run.

2.4 Amount outstanding

All bonds must have a minimum amount outstanding of USD 1 billion in order to be eligible for the iBoxx USD Liquid Investment Grade Top 30 Index. The amount outstanding of each bond is used to calculate its index weight. The index is capitalization-weighted.

2.5 Age

All bonds must be no more than 2 years old when entering in the index. The age is measured from the first settlement date of the bond to the re-balancing date using the native day count convention of the bond. New issues must have a first settlement date on or before the re-balancing date to be included in the index for the next period.

2.6 Geographic scope

The issuer or, in the case of a finance subsidiary, the issuer's guarantor, must be domiciled in:

- Europe: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom
- North America: United States, Canada, Bahamas, Bermuda, Cayman Islands, Netherlands Antilles
- Asia-Pacific: Australia, Japan, New Zealand

2.7 Minimum run

Any bond that enters the iBoxx USD Liquid Investment Grade Top 30 Index must remain in the index for a minimum of 12 months provided it remains eligible for the broad iBoxx USD Corporate Bond Index during that period.

2.8 Lockout period

A bond that drops out of the iBoxx USD Liquid Investment Grade Top 30 Index at re-balancing is excluded from reentering the index for a three-month lockout period.

2.9 Index size, issuer ordering and bonds selection

This chapter describes the procedure that is applied to limit the number of bonds in the iBoxx USD Liquid Investment Grade Top 30 Index.

2.9.1 Selection process

Since the number of bonds in the index is limited to 30, ranking criteria are necessary to select the bonds.

The 45 largest overall issuers are determined based on their share of the broad iBoxx USD Corporate Bond Index. Starting with the highest overall issuer rank, the largest eligible bond of each issuer with a size of at least USD 1.25 billion is selected. If the resulting list contains less than 30 bonds, the cut-off is lowered to USD 1 billion, and the bonds are selected anew starting with the largest issuer. If the resulting list still contains less than 30 bonds, no further action is taken to expand the list.

The criteria described above may lead to bonds or issuers having the same rank and eligibility for the index. If this is the case then the following tie-breaker criteria are applied in the listed order:

- Equally ranked issuers: The issuer with the (1) larger eligible bond, (2) more recently issued eligible bond, (3) longer dated bond, or (4) first in ascending alphabetical order is ranked higher
- Equally ranked bonds from an issuer: The (1) more recently issued, (2) longer dated, or (3) the bond with the smaller ISIN is selected

2.9.2 Rule precedence

A bond must be a member of the iBoxx USD Corporate Bond Index to be eligible for the iBoxx USD Liquid Investment Grade Top 30 Index. If a bond in the iBoxx USD Liquid Investment Grade Top 30 Index is in its minimum run and is disqualified from the iBoxx USD Corporate Bond Index, it will be removed from the iBoxx USD Liquid Investment Grade Top 30 Index.

The rules for the Minimum Run and the Lockout Period take precedence over the other rules for the iBoxx USD Liquid Investment Grade Top 30 Index (specifically the disqualification, selection process and

tie-breaker rules). Thus, a minimum run bond, which would be disqualified from the iBoxx USD Liquid Investment Grade Top 30 Index, but which still qualifies for the broad index, remains in the IBoxx USD Liquid Investment Grade Top 30 Index. This could happen, for example, if a bond's notional falls below the required USD 1 billion minimum but is higher than USD 500 million. A locked out bond will not be selected, even if it qualifies otherwise.

3 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 index at the next rebalancing if necessary.

Where the sector classification of a specific entity is not very clear due to the diversified business of the entity, decision will be made at S&P DJI's discretion. S&P DJI will assign the classification according to its evaluation of the business risk presented in the security prospectus and annual reports, if available. S&P DJI will also compare 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.

3.1 Corporates

Bonds issued by public or private corporations. Bonds secured by a 'floating charge' over some or all assets of the issuer are considered corporate bonds. Corporate bonds are further classified into Financials and Non-Financials bonds and then into their multiple-level economic sectors, according to the issuer's business scope. The category Guaranteed & Wrapped is added under Financials for corporate bonds whose timely coupon and/or principal payments are guaranteed by a non-affiliated insurer or through a letter of credit from a non-affiliated bank. Each bond in the index is assigned to one of the following sectors.

Table 1: Overview of Markit iBoxx Corporates Sectors

	Economic Sector	Market Sector	Market Sub-Sector
Financials	Core Financials	Banks	Banks
		Insurance	Life Insurance
			Nonlife Insurance
	Financial Services	Financial Services	General Financial
			Equity Investment Instruments
			Nonequity Investment Instruments
		Guaranteed & Wrapped	*
Real Estate	Real Estate	Real Estate Investment & Services	
		Real Estate Investment Trusts	
Non-Financials	Energy	Oil & Gas	Oil & Gas Producers
			Oil Equipment / Services & Distribution
		Renewable Energy	Renewable Energy
	Basic Materials	Chemicals	Chemicals
		Basic Resources	Industrial Metals

	Economic Sector	Market Sector	Market Sub-Sector
			Mining
			Forestry & Paper
	Industrials	Construction & Materials	Construction & Materials
		Industrial Goods & Services	Aerospace & Defense
			Electronic & Electrical Equipment
			General Industrials
			Industrial Engineering
			Industrial Transportation
			Support Services
		Consumer Goods	Automobiles & Parts
	Food & Beverage		Beverages
			Food Producers
	Personal & Household Goods		Household Goods
			Personal Goods
			Tobacco
			Leisure Goods
	Health Care		Health Care
			Health Care Equipment & Services
	Consumer Services	Retail	Food & Drug Retailers
			General Retailers
		Media	Media
		Travel & Leisure	Travel & Leisure
		Education	Academic & Educational Services
	Telecommunications	Telecommunications	Integrated Telecommunications
			Wireless Telecommunications
	Utilities	Utilities	Electricity
			Gas / Water & Multiutilities
	Technology	Technology	Software & IT Services
			Technology Hardware & Equipment

3.2 Additional classification

Corporate debt is further classified into senior and subordinated debt. Bank senior debt structure additionally differentiates between Bail-in and Preferred bonds. The Bail-in classification captures

all senior notes which are subject to write-down or conversion into a subordinated instrument on the occurrence of a resolution event, as well as senior bank debt issued by bank holding companies.

Hybrid capital issued by banking and insurance institutions is further detailed into the respective tiers of subordination.

The market information on the tier of subordination for insurance capital is often less standardized and clear than the equivalent issues by banks. In these cases, the classification is based on the maturity, coupon payment and deferral provisions of the bond from the offering circulars of the bonds. The table below displays the seniority classification of debt issued by both financial and non-financial sectors.

Table 2: Overview of seniority levels

Market Sector	Seniority Level 1	Seniority Level 2	Seniority Level 3	
Bank	SEN	Preferred	*	
		Bail-in	*	
	SUB	T2 (post-Jan '13 issuances)		T2 callable
				T2 non-callable
		T2 (pre-Jan '13 issuances)		LT2 callable
				LT2 non-callable
				UT2
		T1		T1 step
			T1 non-step	
Insurance	SEN	*	*	
	SUB	T3	*	
		T2 dated		T2 dated callable
				T2 dated non-callable
		T2 perpetual	*	
T1	*			
Other sectors	SEN	*	*	
	SUB	Other	Hybrid**	
			Non-hybrid	

** Bonds will be required to fulfil the following criteria to be considered hybrids:

- Subordinated
- Deferrable coupons
- First non-call period \geq 5 years
- Either perpetual or 'long-dated', where 'long-dated' is defined as $>$ 25 years of the time to maturity at issuance

4 Index calculation

4.1 Static data

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

4.2 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/>.

4.3 Rebalancing process

The indices are re-balanced every quarter, on the last calendar day of February, May, August, and November after the last index calculation. Re-balancing also takes place if the last day of the month falls on a non-trading day.

New bonds issued are taken into account if they are publicly known to settle until the last calendar day of the month, inclusive, and if their rating has become known at least three business days before the end of the month.

Preview lists of eligible bonds is published on a weekly basis starting on the first Friday that is three Business days after the previous month-end rebalance, and on 6th calendar day of the month (or the next index publication day if the 6th calendar day falls on a non-business day), as well as on four (t-4), three (t-3), two (t-2) and one (t-1) trading days before end of the month.

Two business days before the end of each month, the rating and amount information for the constituents is updated and the list is adjusted for all rating and amount changes which are known to have taken place three business days before the end of the month which could also result in exclusion of the bond. The changes made on T-2 for rating and amount will not be considered for inclusion.

Two business days before the end of the month the final index membership list for the following month is published at the close of business.

The composition of the indices is held constant over the three months to ensure continuity. However, if a bond leaves the broad iBoxx USD Corporates Index between quarterly rebalancings, it is replaced by a suitable substitute. The following rules are used to determine the substitute bond:

- The largest eligible bond from the same issuer is selected if available, or
- The best available bond according to the quarterly index rules is chosen

4.3.1 Rebalancing procedure

In a first step the selection criteria set out in chapter 2 are applied to the universe of USD denominated bonds.

- Bond ratings and amounts outstanding are used from the broad iBoxx USD Corporates index
- The issuers are ranked according to size, the eligible universe is determined and the bonds are selected according to chapter 8.

4.4 Index data

The calculation of the index is based on bid prices. New securities are included in the index 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.

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

4.5 Index calculus

For specific index formulas please refer to the *iBoxx Bond Index Calculus* document available on <https://www.spglobal.com/spdji/en/> under *Methodology*.

4.6 Index history

The Index history starts on 31 December 1998. The index has a base value of 100 on that date.

4.7 Settlement conventions

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

4.8 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.

4.9 Publication of the Markit iBoxx USD Liquid Investment Grade Top 30 Index

The index is calculated at the end of each business day and rebalanced quarterly following the close of the market on the last calendar day of February, May, August and November each year. All indices are calculated as end-of-day and distributed once daily after 4 p.m. EST. The indices are calculated every day except on common U.S. 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. IHS Markit publishes an index calculation calendar which is available in the indices section on <https://www.spglobal.com/spdji/en/> under Calendar for data subscribers. 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 in the indices section on <https://www.spglobal.com/spdji/en/> for data subscribers.

4.10 Data publication and access

The table below summarizes the publication of Markit iBoxx USD Liquid Investment Grade Top 30 Index at <https://www.spglobal.com/spdji/en/> for registered users and on the FTP server.

Table 3: Data publication and access

Frequency	File Type	Access
Daily	Underlying file – Bond level	FTP Server
	Indices files – Index level	FTP Server / website / Bloomberg for index levels only
Weekly (Friday) ¹	Preview components	FTP Server / website
T-4, T-3 & T-2	Preview components	FTP Server / website
Monthly	End of month components	FTP Server / website

¹Previews will be published starting from the first Friday that is three business days after the previous month-end rebalance.

4.11 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.

5 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](#).

6 Changes to the iBoxx USD Liquid Investment Grade Top 30 Index

31-Aug-2023	Annual Index Review 2022 • Treatment of distressed debt exchanges• Introduction of new economic sector classification "Energy" with new market sector classification "Renewable Energy"• Maturity extension section added
01-Jul-2022	Monthly preview start date updated from 10th calendar day to 6th calendar day
31-Mar-2022	Annual Index Review 2021 • Introduction of new market sector classification "Education" with market sub-sector classification "Academic & Educational Services"
31-Dec-2021	Cash re-investment reference rate changed to SOFR
01-Sep-2021	Monthly preview start date updated from 12th calendar day to 10th calendar day
01-Mar-2021	Governance and Regulatory Compliance section added
28-Feb-2021	Implementation of Annual Index Review 2020 • Updated Insurance classification
31 July 2020	Implementation of Annual Index Review 2019 <ul style="list-style-type: none"> • Introduction of updated corporate classification schema • Implementation of updated Bank Tier Classification • Updates as part of the changes in definition and treatment of hybrid bond
22-Mar-2016	Added classification for Guaranteed & Wrapped
15-Mar-2016	Rebalancing Process
01-Oct-2014	Index restatement, complaints sections added, Additional clarifications on bond eligibility, classification and corporate actions
31-Mar-2013	Markit iBoxx USD Liquid Investment Grade Top 30 Index will be based on additional pricing sources as described in the document 'Markit iBoxx Pricing Rules'
30-Apr-2007	The amount outstanding of registered securities exchanged from previous 144A/RegS bonds is the the total amount outstanding of the bond on all occasions.
31-Mar-2006	Launch of the Markit iBoxx USD Liquid Investment Grade Top 30 Index

7 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.

A ESG Disclosures

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY [1]		
1	Name of the benchmark administrator.	IHS Markit Benchmark Administration Limited (IMBA)
2	Underlying asset class of the ESG benchmark. [2]	N/A
3	Name of the S&P Dow Jones Indices benchmark or family of benchmarks.	iBoxx Benchmark Statement
4	Do any of the indices maintained by this methodology take into account ESG factors?	No
Appendix latest update:		May 2023
Appendix first publication:		May 2023

[1] The information contained in this Appendix is intended to meet the requirements of the European Union Commission Delegated Regulation (EU) 2020/1817 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the minimum content of the explanation of how environmental, social and governance factors are reflected in the benchmark methodology and the retained EU law in the UK (The Benchmarks (amendment and Transitional Provision) (EU Exit) Regulations 2019).

[2] The 'underlying assets' are defined in European Union Commission Delegated Regulation (EU) 2020/1816 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published.

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

© 2024 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.