

iBoxx USD Corporates ESG Indices Methodology

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1 Introduction

The iBoxx USD Corporates ESG Indices measure the market-value weighted performance of USD-denominated investment grade corporate debt screening issuers satisfying the Socially Responsible Investing (SRI) exclusion screens and ESG Risk Rating criteria defined in *Bond Selection Rules*.

The index family includes sub-indices based on ratings, maturities and sectors, with all indices using multi-source pricing.

For more information on pricing, please refer to the Markit iBoxx Pricing Rules document available at <https://www.spglobal.com/en/>.

2 Bond Selection rules

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

- Bond Type
- Credit Rating
- Time to maturity
- Amount outstanding
- Sustainability ESG Research

2.1 Bond Type

Only fixed-rate corporate bonds whose cash flows can be determined in advance are eligible for the indices. The indices are comprised solely of bonds.

The iBoxx USD Corporates ESG indices include only USD denominated bonds. The issuer's domicile is not relevant.

In particular, bonds with the following characteristics are included:

- 144A-version only (i.e. there is no corresponding RegS security)
- Fixed coupon bonds
- Callable and Puttable bonds
- Step-ups and event-driven bonds such as rating-driven or registration-driven bonds
- Amortizing bonds and sinking funds with fixed sinking schedules
- Fixed-to-floaters
 - > Hybrid bank/insurance capital bonds
 - > Senior bonds issued by banks with a call option up to 2 years prior to maturity
 - > Undated fixed – to floaters
- Perpetual Bonds of all types
- Financial subordinated debt with a contingent conversion feature at the point of non-viability, in line with the capital adequacy requirements of Basel III

The following bond types are specifically excluded:

- Retail bonds
- Private placements
- Floating Rate Notes
- Zero coupon bonds and zero-coupon step-up bonds
- Dated fixed to floater bonds issued by non-financial issuers
- Dated fixed to floater senior bonds issued by non-banking financial issuers
- Convertibles
- Inflation and other index-linked bonds
- Bonds cum or ex-warrant

- Bonds whose complete coupons are paid at maturity, as they are similar to zero-coupon bonds with only one cash flow
- New bonds entering the index that have already been called prior to rebalancing
- Optional and mandatory convertible bonds
- Subordinated bank or insurance debt with mandatory contingent conversion features that are based on an observable trigger
- 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 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 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, S&P DJI will analyse the features of such securities in line with the principles set out in section 2.1 of this guide. S&P DJI may consult the 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.

2.2 Credit rating

All bonds in the iBoxx USD Corporates ESG 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 iBoxx USD Corporates ESG 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 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

All bonds must have a remaining time to maturity of at least one year at the rebalancing date. Newly issued bonds must meet the minimum initial time to maturity rule. The minimum initial time to maturity as measured from the first settlement date to the maturity date of the bond, must be 18 months or more.

The expected remaining life expressed in years and calculated as follows:

- For plain vanilla bonds, the expected remaining life of the bond is its time to maturity, calculated as the number of days between the last calendar day of the current month and its maturity.
- For dated and undated callable financial hybrid capital bonds, the workout date is assumed to be the first call date.
- For non-financial hybrid capital bonds with an interest rate reset, the workout date is assumed to be the first reset date.
- For soft bullets, the expected remaining life of the bond is its time to the expected maturity and not to its final maturity date.
- For sinking funds and amortizing bonds, the average life is used instead of the final maturity to calculate the remaining time to maturity.

2.4 Amount Outstanding

The minimum required amount outstanding is USD 500 million. The cutoff date to determine the amount outstanding is three business days before the rebalancing.

In the case of 144A/RegS securities that are registered as global securities, the remaining amount of the 144A/RegS version and the registered version are recombined if the bond is not exchanged in full.

RegS bond tap issue amounts, regardless of fungibility status will be added to existing RegS versions to maintain consistency with the treatment of tap issues as reflected under existing 144A versions.

2.5 Sustainalytics ESG Research

At each rebalancing, using data as of the date specified in the rebalancing section, the indices exclude companies that do not satisfy the following, as determined by Sustainalytics.

For more information, please refer to the [Sustainalytics ESG Risk Ratings Methodology](#).

2.5.1 Sustainalytics Global Standards Screening Exclusions

Sustainalytics' Global Standards Screening (GSS) provides an assessment of a company's impact on stakeholders and the extent to which a company causes, contributes, or is linked to violations of international norms and standards. The basis of the GSS assessments is the United Nations Global Compact (UNGC) Principles. Information regarding related standards is also provided in the screening, including the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights, as well as their underlying conventions. Sustainalytics classifies companies into the following three statuses:

- **Non-Compliant:** classification given to companies that do not act in accordance with the UNGC principles and their associated standards, conventions, and treaties.
- **Watchlist:** classification given to companies that are at risk of violating one or more principles, for which all dimensions for Non-Compliant status could not be established or confirmed.
- **Compliant:** classification given to companies that act in accordance with the UNGC principles and their associated standards, conventions, and treaties.

As of each rebalancing, exclude the following:

- companies without coverage
- companies classified as Non-Compliant

For more information, please refer to the [Sustainalytics Global Standards Screening](#).

2.5.2 Sustainalytics Controversies Exclusions

At each rebalancing, exclude the following:

- companies without coverage
- all companies assigned a Controversy Level of five (5)

For more information, please refer to the [Sustainalytics Controversies Research](#).

2.5.3 Sustainalytics Product Involvement Exclusions

At each rebalancing, exclude the following:

- companies without coverage
- all issuers involved in the below product involvement categories at the specified thresholds:

Product Involvement Category	Category of Involvement	Sustainalytics Involvement Proxy	Level of Involvement Threshold	Significant Ownership Threshold
Controversial Weapons	Tailor-made and Essential: The company is involved in the core weapon system, or components/services of the core weapon system that are considered tailor-made and essential for the lethal use of the weapon.	N/A	>0%	≥25%
	Non Tailor-made or Non-Essential: The company provides components/services for the core weapon system, which are either not considered tailor-made or not essential to the lethal use of the weapon.		>0%	≥25%
Military Contracting	Weapons: The company manufactures military weapon systems and/or integral, tailor-made components or these weapons	Revenue	≥5%	N/A
	Weapon-related products and/or services: The company provides tailor-made products and/or services that support military weapons.		≥10%	N/A
Small Arms	Civilian Customers (Assault Weapons): The company manufactures and sells assault weapons to civilian customers.	Revenue	≥0%	≥25%
	Civilian customers (Non-assault weapons): The company manufactures and sells small arms (Non-assault weapons) to civilian customers.		≥0%	≥25%
	Military/law enforcement customers: The company manufactures and sells small arms to military/law enforcement customers.		≥0%	≥25%
	Key Components: The company manufactures and sells key components of small arms.		≥0%	≥25%
	Retail/distribution (Assault weapons): The company is involved in the retail and/or distribution of assault weapons		≥5%	N/A
	Retail/distribution (Non-assault weapons): The company is involved in the retail and/		≥5%	N/A

Product Involvement Category	Category of Involvement	Sustainalytics Involvement Proxy	Level of Involvement Threshold	Significant Ownership Threshold
	or distribution of small arms (Non-assault weapons).			
Alcoholic Beverages	Production: The company manufactures alcoholic beverages.	Revenue	≥10%	N/A
	Retail: The company derives revenues from the distribution and/or retail sale of alcoholic beverages.		≥10%	N/A
	Related Products/Services: The company is a supplier of alcohol-related products/services to alcoholic beverage manufacturers.		≥10%	N/A
Gambling	Operations: The company owns and/or operates a gambling establishment.	Revenue	≥10%	N/A
	Specialized Equipment: The company manufactures specialized equipment used exclusively for gambling.		≥10%	N/A
	Supporting Products/Services: The company provides supporting products/services to gambling operations.		≥10%	N/A
Tobacco Products	Production: The company manufactures tobacco products	Revenue	>0%	≥25%
	Related Products/Services: The company supplies tobacco-related products/services.		≥5%	N/A
	Retail: The company derives revenues from the distribution and/or retail sale of tobacco products.		≥5%	N/A
Nuclear Power	Production: The company produces nuclear power.	Revenue	≥10%	N/A
	Distribution: The company distributes electricity generated from nuclear power.		≥10%	N/A
	Supporting Products/Services: The company provides products/services that support the nuclear power industry.		≥10%	N/A
Adult Entertainment	Production: The company is involved in the production of adult entertainment and/or owns/operates adult entertainment establishments	Revenue	≥5%	N/A
	Distribution: The company is involved in the distribution of adult entertainment materials.		≥10%	N/A
Genetically Modified Plants and Seeds	Development: The company is involved in the development and/or cultivation of genetically modified seeds and/or plants.	Revenue	≥5%	N/A
	Growth: The company grows genetically modified crops.		≥5%	N/A
Oil Sands	Extraction: The company extracts oil sands.	Revenue	≥5%	N/A
Shale Energy	Extraction: The company is involved in shale energy exploration and/or production.	Revenue	≥5%	N/A

Product Involvement Category	Category of Involvement	Sustainalytics Involvement Proxy	Level of Involvement Threshold	Significant Ownership Threshold
Arctic Oil & Gas Exploration	Extraction: The company is involved in oil and gas exploration in Arctic regions	Revenue	≥5%	N/A
Thermal Coal	Extraction: The company extracts thermal coal.	Revenue	≥5%	N/A
	Generation: The company generates electricity from thermal coal.		≥5%	N/A

S&P DJI Level of Involvement refers to the company's direct exposure to such products, while Significant Ownership indicates where the company has indirect involvement via some specified level of ownership of a subsidiary company with involvement.

For more information, please refer to the [Sustainalytics' Product Involvement Research Methodology](#).

2.5.4 Sustainalytics ESG Risk Rating

Sustainalytics ESG Risk Ratings measure the degree to which a company's economic value is at risk from exposure to industry-specific material ESG risks and how well a company is managing those risks.

Sustainalytics classifies companies into the following five risk levels: **Negligible**, **Low**, **Medium**, **High**, and **Severe**.

At each rebalancing, exclude the following:

- companies without coverage
- all companies assigned a "High" or "Severe" risk level

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 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.

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	Automobiles & Parts
		Food & Beverage	Beverages
			Food Producers
		Personal & Household Goods	Household Goods
			Personal Goods
			Tobacco
			Leisure Goods
	Health Care	Health Care	Pharmaceuticals & Biotechnology
			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 ≥ 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 iBoxx USD Corporates ESG Indices rebalance monthly, effective after the close on the last business day of the month. Changes to outstanding amounts are only considered if publicly known three business days prior to month-end. Changes in ratings are only considered if publicly known two business days prior to month-end. New bonds issued are considered if the bonds are publicly known to settle until the last calendar day of the month, inclusive, and if a specific bond's rating is publicly known at least three trading days prior to month-end.

Sustainalytics ESG Research data is considered if publicly known two business days prior to month-end.

A preliminary membership list is published on the 6th calendar day of the month (moved to the next business day in case of holiday/weekend).

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. However, if bonds which are part of broader US Dollar indices become eligible into the indices two business days prior to rebalancing because of rating and/or amount changes, will be included in the indices.

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

4.4 Index data

The calculation of the indices is based on bid prices. New securities are included in the headline index at their respective ask prices when they enter the index. Sub-indices will inherit the prices as applicable for the headline index. 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 is calculated if at least one bond matches all inclusion criteria. If no bonds qualify for an index, then its level remains constant. If at least one bond becomes available again, the index calculation resumes and is 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. All top-level indices are

computed and disseminated Monday to Friday (except during common US trading holidays). They are based on US end of day prices. The indices are also calculated on the last calendar day of each month irrespective of holidays and weekends. If the indices are calculated on a day that is a non-business day, 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.

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 and analytics weights

The iBoxx USD Corporates ESG Indices are 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 intra-month 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.

4.7 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.

4.7.1 Funged bonds

Bonds may be issued in several tranches. The different tranches are initially legally separate and therefore trade independently for a certain period. On and after the funged date, the tranches will be combined into one bond, i.e. the parent tranche will contain the original security, as well as the additional notional(s) from the new tranche(s). After the funged date, the prices for both the securities are the same, because they constitute one uniform bond. This is reflected in the indices as follows:

4.7.1.1 Parent and new tranche are both index constituents

- After the funged date, the price from the parent tranche is used for the funged tranche; no price for the funged bond
- Funged tranche leaves the index at the next rebalancing and parent amount outstanding increases accordingly

4.7.1.2 Parent is an index constituent, but the new tranche is not

- No special intra-month treatment necessary
- Parent amount outstanding increases at the next rebalancing

4.7.1.3 Parent is not an index constituent but the new tranche is

- No special intra-month treatment necessary
- Funged tranche leaves the index; parent tranche enters the index at the next rebalancing

4.7.2 Full redemptions: exercised calls, puts and buybacks

If a bond is fully redeemed intra-month, the bond effectively ceases to exist. In all calculations, the redeemed bond is treated as cash based on the last price, the call price or repurchase price, as applicable. The redemption factor, redemption and the redemption price are used to treat these events in the index and analytics calculation. In addition, the clean price of the bond is set to the redemption price, and the interest accrued until the redemption date is treated as an irregular coupon payment.

4.7.3 Bonds trading flat of accrued

If a bond is identified as trading flat of accrued, the accrued interest of the bond is set to 0 in the total return index calculation and is excluded from the calculation of all bond and index analytical values.

Bonds will be considered trading flat of accrued in any of the following situations:

- a bond has been assigned a default rating and/or
- issuer has announced a failure to pay a coupon and/or
- issuer has announced an intention not to make a payment on an upcoming coupon (grace period).

4.7.4 Maturity extension

4.7.4.1 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

4.7.4.2 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.

4.7.5 Multi-coupon bonds

Some bonds have pre-defined coupon changes that lead to a change in the annual coupon over the life of the bond. In all instances, the coupon change must be a fixed amount on top of a fixed coupon, i.e. floating coupon bonds are not eligible for the indices. The two main categories of bonds are step-up bonds and event-driven bonds.

- **Step-up bonds:** These are bonds with a pre-defined coupon schedule that cannot change during the life of the bond. The coupon schedule is used in all bond calculations.
- **Event-driven bonds:** These are bonds whose coupon may change upon occurrence (or non-occurrence) of pre-specified events, such as rating changes, e.g. rating-driven bonds, failure to register (register-driven bonds), or failure to complete a merger (merger-driven bonds). In the calculation of the indices and the analytics, the coupon schedule as of the calculation date is used. That is to say, any events occurring after the calculation date are ignored in the determination of the applicable coupon schedule. *Example of an event-driven bond:* A bond's rating changes on 31 December 2003 from A- to BBB+ and the coupon steps up from 6% to 6.25% from 1 March 2004 onward. The coupon dates are 1 October and 1 April each year. The correct coupon schedule for the bond and index calculations is date dependent. The index calculation on 20 December 2003 uses the 6% coupon for the whole life of the bond, while the calculation on 31 January 2004 uses a 6% coupon for the current coupon period to 29 February 2004, and a 6.25% coupon for all later interest payments. The index calculation on 20 March uses a 6% coupon until 29 February, a 6.25% coupon for the remainder of the current coupon period and a 6.25% coupon for all future coupon payments. The index calculation after 1 April uses a 6.25% coupon.

4.7.6 Ex-dividend conventions

Some markets have ex-dividend conventions. Ex-dividend means that the next coupon is detached from the bond several days in advance of the coupon payment date. The date on which the next coupon is detached is the ex-dividend date and the period between the ex-dividend date and the coupon payment date is the ex-dividend period. If a bond is in the ex-dividend period, the next coupon payment will not be paid to a buyer of this bond, but will be paid to the original bond holder.

The indices and analytics calculations take ex-dividend conventions into account. During the ex-dividend period, the accrued interest of the bond is negative, while the next coupon payment is held separate in the variable coupon adjustment. If the bond enters the index during the ex-dividend period, then the next coupon payment and the coupon adjustment will not accrue to the index. However, if the bond was already in the index, the next coupon payment needs to be included in the total return calculations. This is controlled via the ex-dividend indicator which is 0 if the bond enters the index during the current ex-dividend period and 1 if not. The same treatment is also applied to all analytics calculation, i.e. the first cash flow is excluded from the calculations if the bond enters during the current ex-dividend period.

4.8 Index history

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
iBoxx USD Corporates ESG Index	03/22/2024	01/31/2016	01/31/2016	100

Please refer to Appendix I for further details on treatment of history.

4.9 Settlement conventions

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

4.10 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.

4.11 Publication of the index

The index calculates as an end-of-day index and distributes once daily after close of U.S. markets.

Bond and index analytical values calculate end of day Monday to Friday using that day's closing prices. In addition, bond and index analytical values calculate using the previous trading day's closing prices on the last calendar day of each month if that day is not a regular trading day, as well as on common bank holidays, as published in the iBoxx index calculation calendar, available on <https://www.spglobal.com/spdji/en/> under *iBoxx Indices Calendars*. Index data is also available from the main information vendors.

Closing index values and key statistics are published at the end of each calculation day in the *Indices* section on <https://www.spglobal.com/spdji/en/> for registered users.

4.12 Data publication and access

The table below summarizes the publication of iBoxx USD Corporates ESG indices on the SFTP server.

Table 3: File types, frequency and access

Frequency	File Type	Access
Daily	Underlying file – Bond level	SFTP Server
	Indices file – Index level	SFTP Server / Website / Bloomberg / Refinitiv for index levels only
Daily from the 6th calendar day of the month (or the next index publication day if the 6th calendar day falls on a non-business day)	Forwards	SFTP Server
Monthly	End of Month Components	SFTP Server
	XREF files	SFTP Server

Below is a summary of the IDs for each publication channel:

Table 4: Index identifiers

Index Name	Version	ISIN	SEDOL
iBoxx USD Corporates ESG	CPI	GB00BRWTLC21	BRWTLC2
	TRI	GB00BRWTLD38	BRWTLD3

4.13 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 Corporates ESG Indices

Date	Change
Mar 22, 2024	• Launch of iBoxx USD Corporates ESG Indices

7 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.	S&P Dow Jones Indices Limited	
2.	Type of benchmark or family of benchmarks[2]	Fixed Income	
3.	Name of the S&P Dow Jones Indices benchmark or family of benchmarks	iBoxx USD Corporates ESG Indices	
4.	Do any of the indices maintained by this methodology take into account ESG factors?	Yes	
5.	If the response to (4) is “Yes,” the indices stated here take into account ESG factors	For a list of the benchmarks within this family that take in account ESG factors, please refer to the IMBA Register here .	
6.	Where the response to (4) is ‘Yes’, the section below lists those ESG factors that are taken into account by the ESG indices governed by the methodology, including those ESG factors listed in Annex II to Delegated Regulation (EU) 2020/1816		
	ESG Factor[3]	S&P DJI ESG Factor	Comments
6.a List of environmental factors considered	N/A	Business Activities: <i>Thermal Coal</i>	Exclusion. For more information, please refer to the ‘ <i>Bond Selection Rules</i> ’ section of the methodology.
	N/A	Business Activities: <i>Oil Sands</i>	Exclusion. For more information, please refer to the ‘ <i>Bond Selection Rules</i> ’ section of the methodology.
	N/A	Business Activities: <i>Shale Energy</i>	Exclusion. For more information, please refer to the ‘ <i>Bond Selection Rules</i> ’ section of the methodology.
	N/A	Business Activities: <i>Arctic Oil & Gas Exploration</i>	Exclusion. For more information, please refer to the ‘ <i>Bond Selection Rules</i> ’ section of the methodology.
	N/A	Business Activities: <i>Nuclear Power</i>	Exclusion. For more information, please refer to the ‘ <i>Bond Selection Rules</i> ’ section of the methodology.
	N/A	Controversies Rating	Exclusion. For more information, please refer to the ‘ <i>Bond Selection</i>

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[1]

			<i>Rules'</i> section of the methodology.
6.b List of social factors considered	International treaties and conventions, United Nations principles or, where applicable, national law used in order to determine what constitutes a 'controversial weapon'.	Business Activities: <i>Controversial Weapons</i>	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
	Weighted average percentage of benchmark constituents in the controversial weapons sector.	Business Activities: <i>Controversial Weapons</i>	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
	Weighted average percentage of benchmark constituents in the tobacco sector.	Business Activities: <i>Tobacco</i>	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
	Number of benchmark constituents subject to social violations (absolute number and relative divided by all benchmark constituents), as referred to in international treaties and conventions, United Nations principles and, where applicable, national law.	Non-Compliant Companies	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
	N/A	Business Activities: <i>Military Contracting</i>	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
	N/A	Business Activities: <i>Small Arms</i>	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
	N/A	Business Activities: <i>Gambling</i>	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
	N/A	Business Activities: <i>Alcohol</i>	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
	N/A	Business Activities: <i>Adult Entertainment</i>	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
	N/A	Business Activities: <i>Genetically Modified Plants</i>	Exclusion. For more information, please refer to the ' <i>Bond Selection</i>

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[1]			
			<i>Rules'</i> section of the methodology.
	N/A	Controversies Rating	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
6.c List of governance factors considered	N/A	Controversies Rating	Exclusion. For more information, please refer to the ' <i>Bond Selection Rules</i> ' section of the methodology.
7.	Data and standards used		
7.a	Data sources, verification and quality of data	The datasets are defined as either: Reported: All data in the dataset are provided as disclosed by companies, or as stated in the public domain. Modeled: All data are derived using a proprietary modelling process with only proxies used in the creation of the dataset. Reported and Modeled: The dataset is either a mix of reported and Modeled data or is derived by the vendor using reported data/information in a proprietary scoring or determination process. The index methodology uses the following ESG datasets.	
	Data Source	Dataset	
	Sustainalytics (external data source)	This methodology uses the following datasets provided by Sustainalytics, a global leader in sustainability research and analytics: - Product Involvement (Reported and Modeled) - Global Standards Screening (Reported and Modeled) - Controversy Ratings (Reported and Modeled) For more information, please refer to www.sustainalytics.com.	
7.b	Verification and quality of data.	S&P DJI's Global Data Management Team holds the responsibility of data quality assurance and validation of third-party data sources, including all ESG datasets. This process involves regular reviews of new data received, and includes comparison with previous data, coverage and identifier checks as well as escalation of suspect data to data vendors. S&P DJI also hold regular feedback sessions with data partners and vendors to share any quality concerns and to remedy any issues that are observed during data validations performed by the Global Data Management Team. In addition, all users of third-party data perform their own review of data used in the maintenance of indices. Sustainalytics Datasets: 1. Quality Approach to <i>Controversies</i> Company Research: Continuous improvement and maintenance of quality and research standards; Continuous refinement of methodologies and guidance to adjust to emerging societal ESG developments; Continuous screening and curation of news and NGO sources; Screening of corporate reporting and web disclosure; Senior sector lead quality reviews of controversy assessments before publication. For high scoring controversy ratings (Categories 4 and 5), companies are contacted to verify allegations that are relevant in the controversy ratings methodology and their response is taken	

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[1]

		into consideration, and whenever relevant included; proposals for assessment changes are reviewed by an internal oversight body. If the proposal is approved, a written indicator assessment is drafted according to Sustainalytics Controversy guidelines. Before such assessment is published, a quality and editorial review is conducted. Data and deliverable management: Quality and reliability of Covered Company and identifier data through automated quality assurance; Quality and reliability of Sustainalytics proprietary (i.e. research) data through automated quality assurance, prior to publication; Senior sector lead quality reviews of controversy assessments before publication; Quality and reliability of biweekly client deliverables through end-of-gate quality assurance processes (automated and manual); Monitoring and investigating ESG score fluctuations and their root causes using manual and automated tools. Update cycle: Continuous daily news monitoring is conducted as incidents occur and feed into updates of controversy indicators; Quarterly reviews of high scoring cases regardless the occurrence of incidents; Three year back controversy screen for entities added to the research universe after every quarterly rebalance; Annual review of all company's controversy ratings when the overall Risk Rating of a company is annually updated; Analyst discretion to react to relevant developments at any time, regardless the above scheduled reviews. 2. Quality Approach to <i>Controversial Weapons Radar</i> (CWR) Company Research: Continuous improvement and maintenance of quality and research standards; Continuous refinement of methodologies and guidance to adjust to emerging societal ESG developments; Continuous screening and curation of news and NGO sources; Screening of corporate reporting and web disclosure; All involved companies are contacted for fact checking relevant in the methodology and their response is taken into consideration, and whenever relevant included; Before CWR assessment is published, a quality and editorial review is conducted and the CWR Committee signs off on entire research. Data and deliverable management: Quality and reliability of Covered Company and identifier data; Quality and reliability of Sustainalytics proprietary (i.e. research) data prior to publication; Quality and reliability of quarterly client deliverables through end-of-gate quality assurance processes (automated and manual). Update cycle: Continuous daily news monitoring is conducted as incidents occur and feed into updates of controversy indicators. 3. Quality Approach to <i>Global Standards Screening</i> (GSS) Company Research: Continuous improvement and maintenance of quality and research standards; Companies are contacted to verify allegations that are relevant in the Global Standards Screening methodology and their response is taken into consideration, and whenever relevant included; Quality reviews of ESG assessments before publication. For the Global Standards Screening, proposals for assessment changes are reviewed by an internal oversight body. If the proposal is approved, a written report is drafted according to the GSS guidelines. Before a Watchlist or Non Compliant status for an issue is published, a quality and editorial review is conducted on the report and the sources used therein. Data and deliverable management:
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EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[1]

		Quality and reliability of Covered Company and identifier data through automated quality assurance; Quality and reliability of Sustainalytics proprietary (i.e. research) data through automated quality assurance, prior to publication; Quality and reliability of standard deliverables through end-of-gate quality assurance process; Quality and reliability of custom client deliverables through end-of-gate quality assurance processes (automated and manual); Monitoring and investigating ESG score fluctuations and their root causes using automated tools. Update cycle: Continuous monitoring is conducted as incidents occur and feed into updates of Global Standards Screening reports • Quarterly updates to Global Standards Screening reports • New companies added to the universe as a result of rebalancing are researched and updated in client systems quarterly; Corporate actions are processed in client systems on a quarterly basis in order to capture any involvement changes arising from mergers, acquisitions or other corporate actions. 4. Quality Approach to <i>Product Involvement</i> Company Research: Continuous improvement and maintenance of quality and research standards; All Product Involvement research is reviewed by senior analysts. The review comprises checking the accuracy of the involvement analysis by studying the original source as well as consistency with the research methodology and framework; Final validation of the research before publication is done by the Research Manager. Assessment changes are additionally reviewed by an internal oversight body. Data and deliverable management: Quality and reliability of Covered Company and identifier data through automated quality assurance; Quality and reliability of Sustainalytics proprietary (i.e. research) data through automated quality assurance, prior to publication; Quality and reliability of standard deliverables through end-of-gate quality assurance process; Quality and reliability of custom client deliverables through end-of-gate quality assurance processes (automated and manual); Monitoring and investigating ESG score fluctuations and their root causes using automated tools. Update cycle: Product Involvement Research is updated annually; New companies added to the universe as a result of rebalancing are researched and updated in client systems quarterly; Corporate actions are processed in client systems on a quarterly basis in order to capture any involvement changes arising from mergers, acquisitions or other corporate actions.
7.c	Reference standards	Sustainalytics Datasets: The methodology behind Sustainalytics' <i>Global Standards Screening</i> is based on the following international standards: UN Global Compact Principles, International Labour Organisation's (ILO) Conventions, the OECD Guidelines for Multinational Enterprises, UN Guiding Principles on Business and Human Rights, and World Governance Indicators. On top of these international (convention-based) standards, Sustainalytics also look at industry specific standards or initiatives. Examples are the Round Table on Sustainable Palm Oil, the standards for Systemically Important Banks, local Corporate Governance codes, and many others. The methodology used by Sustainalytics for <i>Controversial Weapon Radar</i> is relying on the following international conventions for the controversial weapon definition: Anti-Personnel Mines - Sustainalytics utilizes the definition applied by the 1997 Ottawa (Mine-Ban) Treaty.

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[1]

		Biological Weapons - Sustainalytics utilizes the definition outlined in the 1972 Biological and Toxin Weapons Convention (BTWC). Chemical Weapons - Sustainalytics utilizes the definitions outlined in the 1993 Chemical Weapons Convention (CWC). Cluster Weapons - Sustainalytics utilizes the definition applied by the 2008 Convention on Cluster Munitions (CCM), which outlines seven criteria to define a cluster weapon, besides weight and submunition quantity. Nuclear Weapons – Sustainalytics bases its definition of a nuclear weapon on the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Tlatelolco). In addition, international legislation is covered by the Controversial Weapons Radar through the following data points: a) Conventions Overview (Company Level): Offers information on the country of domicile's convention signatory status: Anti-personnel mines: Anti-Personnel Mine Ban Convention, 1999 Biological weapons: Biological and Toxin Weapons Convention (BTWC), 1972 Chemical weapons: The Chemical Weapons Convention (CWC), 1997 Cluster weapons: Convention on Cluster Munitions, 2008 Nuclear weapons: Non-proliferation Treaty (NPT), 1968 b) Nuclear Weapons-NPT Conventions Overview (Supported Program Level): Offers an overview of the national nuclear program(s) a company contributes to, and their countries' NPT status Controversies research tracks incidents through various media and NGO sources and is not a comprehensive screening product. The following standards are included in the framework for analysis for the <i>Controversies</i> research, however reference to the exact standards or norms breaches is not described, given that Sustainalytics does not assess the issuer's compliance with such conventions, but only provides an indication of the expected impact the reported allegations may have for businesses and stakeholders: UN Global Compact Principles, OECD Guidelines for Multinational Enterprises. On top of these international (convention-based) standards we also look at industry specific standards, initiatives or principles as further elaborated in underlying conventions and authoritative guidelines For Product Involvement Sustainalytics does not rely on international standards or conventions.
Appendix latest update:		N/A
Appendix updates:		N/A
Appendix first publication:		March 2024

[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.

[3] 'ESG factors' are defined in Annex II of 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.

8 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.

9 Appendix I

Historical Sustainability Product Involvement Exclusions Coverage

For history prior to September 30, 2020, all issuers involved in the below product involvement categories at the specified thresholds were excluded. Issuers were not excluded due to lack of coverage.

Product Involvement Category	Category of Involvement	Level of Involvement Threshold
Controversial Weapons	Tailor-made and Essential: The company is involved in the core weapon system, or components/services of the core weapon system that are considered tailor-made and essential for the lethal use of the weapon.	>0%
	Non Tailor-made or Non-Essential: The company provides components/services for the core weapon system, which are either not considered tailor-made or not essential to the lethal use of the weapon.	>0%
Military Contracting	Weapons: The company manufactures military weapon systems and/or integral, tailor-made components or these weapons	≥5%
	Weapon-related products and/or services: The company provides tailor-made products and/or services that support military weapons.	≥10%
Small Arms	Civilian Customers (Assault Weapons): The company manufactures and sells assault weapons to civilian customers.	≥0%
	Military/law enforcement customers: The company manufactures and sells small arms to military/law enforcement customers.	≥0%
	Key Components: The company manufactures and sells key components of small arms.	≥0%
	Retail/distribution (Assault weapons): The company is involved in the retail and/or distribution of assault weapons	≥5%
Alcoholic Beverages	Production: The company manufactures alcoholic beverages.	≥10%
	Retail: The company derives revenues from the distribution and/or retail sale of alcoholic beverages.	≥10%
	Related Products/Services: The company is a supplier of alcohol-related products/services to alcoholic beverage manufacturers.	≥10%
Gambling	Operations: The company owns and/or operates a gambling establishment.	≥10%

Product Involvement Category	Category of Involvement	Level of Involvement Threshold
	Specialized Equipment: The company manufactures specialized equipment used exclusively for gambling.	≥10%
	Supporting Products/Services: The company provides supporting products/services to gambling operations.	≥10%
Tobacco Products	Production: The company manufactures tobacco products	>0%
	Related Products/Services: The company supplies tobacco-related products/services.	≥5%
	Retail: The company derives revenues from the distribution and/or retail sale of tobacco products.	≥5%
Nuclear Power	Distribution: The company distributes electricity generated from nuclear power.	≥10%
	Supporting Products/Services: The company provides products/services that support the nuclear power industry.	≥10%
Adult Entertainment	Production: The company is involved in the production of adult entertainment and/or owns/operates adult entertainment establishments	≥5%
	Distribution: The company is involved in the distribution of adult entertainment materials.	≥10%
(ex-GMO) Genetically Modified Plants and Seeds	Development: The company is involved in the development and/or cultivation of genetically modified seeds and/or plants.	≥5%
	Growth: The company grows genetically modified crops.	≥5%
Thermal Coal	Extraction: The company extracts thermal coal.	≥5%
	Generation: The company generates electricity from thermal coal.	≥5%

Historical Sustainability ESG Risk Rating

For history prior to September 30, 2020, issuers were not excluded due to lack of coverage.

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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