

**S&P Dow Jones
Indices**

A Division of **S&P Global**

iBoxx Global Core Corporates ESG Index Methodology

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Table of Contents

1 Introduction	4
2 Bond Selection rules	5
2.1 Bond Type	5
2.1.1 EUR & GBP denominated bonds	5
2.1.2 USD denominated bonds	6
2.2 Credit rating	7
2.3 Time to Maturity	7
2.4 Amount Outstanding	8
2.5 Sustainalytics ESG Research	8
2.5.1 Sustainalytics Global Standards Screening Exclusions	8
2.5.2 Sustainalytics Controversies Exclusions	8
2.5.3 Sustainalytics Product Involvement Exclusions	8
2.5.4 Sustainalytics ESG Risk Rating	11
3 Bond classification	12
3.1 Corporates	12
3.2 Additional classification	13
4 Index Calculation	15
4.1 Static data	15
4.2 Bond prices	15
4.3 Rebalancing process	15
4.4 Index data	15
4.5 Index calculus	16
4.6 Index and analytics weights	16
4.7 Treatment of the special intra-month events	16
4.7.1 Funged bonds	16
4.7.1.1 Parent and new tranche are both index constituents	16
4.7.1.2 Parent is an index constituent, but the new tranche is not	16
4.7.1.3 Parent is not an index constituent but the new tranche is	16
4.7.2 Full redemptions: exercised calls, puts and buybacks	16
4.7.3 Bonds trading flat of accrued	17
4.7.4 Maturity extension	17

4.7.4.1 Maturity extension for perpetuals & dated fixed-to-fixed bonds with a reset date	17
4.7.4.2 Maturity extension for perpetual bonds without a reset date	17
4.7.5 Multi-coupon bonds	17
4.7.6 Ex-dividend conventions	18
4.8 Index history	18
4.9 Settlement conventions	18
4.10 Calendar	18
4.11 Publication of the index	18
4.12 Data publication and access	19
4.13 Index review	19
5 Index Governance	20
6 Changes to the iBoxx Global Core Corporates ESG Index	21
7 ESG Disclosures	22
8 Further information	29
9 Appendix I	30
Disclaimer	32

1 Introduction

The iBoxx Global Core Corporates ESG Index measures the market-value weighted performance of USD, EUR, and GBP 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*.

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

2.1 Bond Type

Only fixed-rate corporate bonds with cash flows that can be determined in advance are eligible for the index. The index is comprised solely of bonds.

The iBoxx Global Core Corporates ESG index includes USD, EUR, and GBP denominated bonds. The issuer's domicile is not relevant.

For all eligible currencies, bonds with the following characteristics are included:

- Fixed coupon bonds (plain vanilla bonds)
- Event-driven bonds with step-up and step-down coupons, such as rating- or tax-driven bonds
- Subordinated financial debt with a contingent conversion feature at the point of non-viability, in line with the capital adequacy requirements of Basel III

For all eligible currencies, bonds with the following characteristics are excluded:

- Floating Rate Notes
- Subordinated financial debt with mandatory contingent conversion features that are based on an observable trigger or with any conversion options before the first call date
- Optionally and mandatory convertible bonds from non-financial issuers
- Asset-backed securities and mortgage-backed securities

For retail bonds and private placements, publicly available information is not always conclusive and the classification of a bond as a retail bond or private placement is made at S&P DJI's discretion based on the information available at the time of determination. S&P DJI may consult with the specific Index Advisory Committees to review potential retail bonds or private placements. Partial private placements where information on the specific amounts publicly placed and privately placed can be ascertained are included in the index with the amount publicly placed. If the amount publicly placed is below the cut-off, the bond is not included in the index.

Any bond classified as retail or private placement is added to the list of excluded private placement and retail bonds. The list is published on <https://www.spglobal.com/spdji/en/> for future reference and to ensure decisions' consistency.

In instances where a new bond type is not specifically excluded or included according to the published index rules, S&P DJI analyzes the features of such securities in line with the principles set out in section 2 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 is published and the index rules are updated accordingly.

2.1.1 EUR & GBP denominated bonds

The following applies to EUR and GBP denominated bonds in addition to the above.

Bonds with the following characteristics are included:

- Zero coupon bonds
- Step-up bonds, step-up callable bonds with European options
- Callable/puttable and extendable bonds with European options
- Dated and undated callable subordinated corporate bonds, including fixed-to-floating rate bonds
- Soft bullet bonds. These are bonds with an initial fixed-coupon period, and a variable or step-up coupon period thereafter, that are structured so that they are expected to be redeemed at the end of the initial period
- Bonds with call options where the first and subsequent call dates are on a date when the bond is otherwise no longer eligible for the index, i.e. bonds with American call options within the last year prior to maturity
- Subordinated financial fixed-to-floating rate bonds with a reset date on or after the first call date
- Senior bank bonds with call options where the first call date is 25 months or less prior to final maturity

The following bond types are excluded:

- Other bonds with American call options, and undated bonds
- Collateralized Debt Obligations (CDOs) and bonds collateralized by CDOs
- Bonds with differences between accrual and coupon payment periods and monthly-paying bonds
- Private placements
- Retail bonds

2.1.2 USD denominated bonds

The following applies to USD denominated bonds in addition to the above.

Bonds with the following characteristics are included:

- Callable and puttable 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.
- Secured bonds
 - > Secured bonds issued by insurance companies
 - > First mortgaged bonds/ first priority security interest
 - > Covered bonds
 - > Secured bonds issued by an SPV with known cash-flows

The following bond types are excluded:

- Zero coupon bonds and zero-coupon step-up bonds
- Bonds cum or ex-warrant
- Convertibles
- Dated fixed to floater bonds issued by non-financial issuers

- Dated fixed to floater senior bonds issued by non-banking financial issuers
- Inflation and other index-linked bonds
- 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
- For liquidity reasons, the following market types are excluded from the bond universe:
 - > Municipal Bonds
 - > 144As
 - > Brady Bonds
 - > Restructured sovereign and sub-sovereign debt

2.2 Credit rating

All bonds in the iBoxx Global Core Corporates ESG 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 iBoxx Global Core Corporates ESG 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

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 for USD bonds and 12 months or more for EUR/GBP bonds.

The expected remaining life is expressed in years and calculates 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 for each currency is USD 500 million, EUR 500 million, and GBP 250 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.

2.5 Sustainalytics ESG Research

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

For more information on Sustainalytics, please refer to <http://www.sustainalytics.com/>.

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

2.5.2 Sustainalytics Controversies Exclusions

At each rebalancing, exclude the following:

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

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	Sustainability 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/or distribution of small arms (Non-assault weapons).		≥5%	N/A
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

Product Involvement Category	Category of Involvement	Sustainalytics Involvement Proxy	Level of Involvement Threshold	Significant Ownership Threshold
	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
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.

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 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. 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 insurance-wrapped is added under Financials for corporate bonds whose timely coupon and/or principal payments are guaranteed by a special mono-line insurer such as AMBAC or MBIA. The sector overview is shown in Table 1 below.

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	Equity Investment Instruments
			General Financial
			Nonequity Investment Instruments
		Insurance-wrapped	*
	Real Estate	Real Estate	Real Estate Investment & Services
			Real Estate Investment Trusts
Non-Financials	Basic Materials	Basic Resources	Forestry & Paper
			Industrial Metals
			Mining
		Chemicals	Chemicals
	Consumer Goods	Automobiles & Parts	Automobiles & Parts
		Food & Beverage	Beverages
			Food Producers

	Economic Sector	Market Sector	Market Sub-Sector
		Personal & Household Goods	Household Goods
			Leisure Goods
			Personal Goods
			Tobacco
	Consumer Services	Education	Academic & Educational Services
		Media	Media
		Retail	Food & Drug Retailers
			General Retailers
		Travel & Leisure	Travel & Leisure
	Energy	Oil & Gas	Oil Equipment / Services & Distribution
			Oil & Gas Producers
		Renewable Energy	Renewable Energy
	Health Care	Health Care	Health Care Equipment & Services
			Pharmaceuticals & Biotechnology
	Industrials	Construction & Materials	Construction & Materials
		Industrial Goods & Services	Aerospace & Defense
			Electronic & Electrical Equipment
			General Industrials
			Industrial Engineering
			Industrial Transportation
			Support Services
	Technology	Technology	Software & IT Services
			Technology Hardware & Equipment
	Telecommunications	Telecommunications	Integrated Telecommunications
			Wireless Telecommunications
	Utilities	Utilities	Electricity
			Gas / Water & Multiutilities

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 index rebalances 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 sixth calendar day of the month (moved to the next business day in case of holiday/weekend).

Three business days before the end of each month, a membership list with final amount outstanding for each bond is published.

Two business days before the end of each month, the rating information for the constituents is updated and the list is adjusted for all rating changes which are known to have taken place two trading days before the end of the month.

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 index is based on bid prices. New securities are included in the headline index at their respective ask prices when they enter the 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.

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 Global Core Corporates ESG index is market-value-weighted. The amount outstanding of a bond is only adjusted within the rebalancing process.

All calculations are based on the adjusted amount outstanding that reflects the outstanding bond notional at the last rebalancing. The bond prices relate to the nominal value of 100.

4.7 Treatment of the special intra-month events

Data for the application of corporate actions in the index 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 fudge 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 fudge 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 fudge 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

The Index history starts on 31 January 2016. The index has a base value of 100 on that date.

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

4.9 Settlement conventions

All iBoxx indices are calculated 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 iBoxx Global Core Corporates ESG index is calculated as end-of-day index and distributed once daily after close of US markets.

Bond and index analytical values are calculated end of day Monday to Friday using that day's closing prices. In addition, bond and index analytical values are calculated 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. This index calculation calendar is 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 the index 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

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

Table 4: Index identifiers

Index Name	Version	ISIN	SEDOL	BBG	RIC
iBoxx Global Core Corporates ESG	CPI_H	GB00BSF30V04	BSF30V0	IBXXGCEP	IBXXGCEP
	TRI_H	GB00BSF30W11	BSF30W1	IBXXGCER	IBXXGCER
	CPI_U	GB00BSF30X28	BSF30X2	IBXXGCEH	IBXXGCEH
	TRI_U	GB00BSF30Y35	BSF30Y3	IBXXGCEU	IBXXGCEU

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 Global Core Corporates ESG Index

Date	Change
July 5, 2024	<ul style="list-style-type: none"><li data-bbox="820 359 1344 384">• Launch of iBoxx Global Core Corporates ESG Index

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.	IHS Markit Benchmark Administration Ltd. ('IMBA UK')	
2.	Underlying asset class of the ESG benchmark[2]	Fixed Income	
3.	Name of the S&P Dow Jones Indices benchmark or family of benchmarks	iBoxx ESG Index Family Benchmark Statement	
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 'Bond Selection Rules' section of the methodology.
	N/A	Business Activities: <i>Oil Sands</i>	Exclusion. For more information, please refer to the 'Bond Selection Rules' section of the methodology.
	N/A	Business Activities: <i>Shale Energy</i>	Exclusion. For more information, please refer to the 'Bond Selection Rules' section of the methodology.
	N/A	Business Activities: <i>Arctic Oil & Gas Exploration</i>	Exclusion. For more information, please refer to the 'Bond Selection Rules' section of the methodology.
	N/A	Business Activities: <i>Nuclear Power</i>	Exclusion. For more information, please refer to the 'Bond Selection Rules' section of the methodology.
	N/A	Controversies Rating	Exclusion. For more information, please refer to the 'Bond Selection

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	<p>The datasets are defined as either:</p> <ul style="list-style-type: none"> - 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. <p>The index methodology uses the following ESG datasets.</p>	
	Data Source	Dataset	
	Sustainalytics (external data source)	<p>This methodology uses the following datasets provided by Sustainalytics, a global leader in sustainability research and analytics:</p> <ul style="list-style-type: none"> · Product Involvement (Reported and Modeled) · Global Standards Screening (Reported and Modeled) · Controversy Ratings (Reported and Modeled) <p><i>For more information, please refer to www.sustainalytics.com.</i></p>	
7.b	Verification and quality of data.	<p>The data quality process involves regular reviews of new data received, and includes comparison with previous data, outlier and error checks and escalation of suspect data to data vendors. S&P DJI also holds 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. Many of the third-party data used by S&P DJI is reviewed against secondary and tertiary data sources for cross comparison and validation. Some more thematic or specific datasets may not have a comparable data source that can be used for comparison, but these datasets are still reviewed for internal consistency and self-comparison over time.</p> <p>Sustainalytics Datasets:</p> <ol style="list-style-type: none"> 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. 	

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

	<p>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 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.</p> <p>Data and deliverable management:</p> <p>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.</p> <p>Update cycle:</p> <p>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.</p> <p>2. Quality Approach to <i>Controversial Weapons Radar (CWR)</i> Company Research:</p> <p>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.</p> <p>Data and deliverable management:</p> <p>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).</p> <p>Update cycle:</p> <p>Continuous daily news monitoring is conducted as incidents occur and feed into updates of controversy indicators.</p> <p>3. Quality Approach to <i>Global Standards Screening (GSS)</i> Company Research:</p> <p>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.</p> <p>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</p>
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EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[1]

		<p>an issue is published, a quality and editorial review is conducted on the report and the sources used therein.</p> <p>Data and deliverable management:</p> <p>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.</p> <p>Update cycle:</p> <p>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.</p> <p>4. Quality Approach to <i>Product Involvement</i> Company Research:</p> <p>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.</p> <p>Data and deliverable management:</p> <p>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.</p> <p>Update cycle:</p> <p>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.</p>
7.c	Reference standards	<p>Sustainalytics Datasets:</p> <p>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.</p> <p>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.</p>

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[1]	
	<p>The methodology used by Sustainalytics for <i>Controversial Weapon Radar</i> is relying on the following international conventions for the controversial weapon definition:</p> <p>Anti-Personnel Mines - Sustainalytics utilizes the definition applied by the 1997 Ottawa (Mine-Ban) Treaty.</p> <p>Biological Weapons - Sustainalytics utilizes the definition outlined in the 1972 Biological and Toxin Weapons Convention (BTWC).</p> <p>Chemical Weapons - Sustainalytics utilizes the definitions outlined in the 1993 Chemical Weapons Convention (CWC).</p> <p>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.</p> <p>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).</p> <p>In addition, international legislation is covered by the Controversial Weapons Radar through the following data points:</p> <p>a) Conventions Overview (Company Level): Offers information on the country of domicile's convention signatory status:</p> <p>Anti-personnel mines: Anti-Personnel Mine Ban Convention, 1999</p> <p>Biological weapons: Biological and Toxin Weapons Convention (BTWC), 1972</p> <p>Chemical weapons: The Chemical Weapons Convention (CWC), 1997</p> <p>Cluster weapons: Convention on Cluster Munitions, 2008</p> <p>Nuclear weapons: Non-proliferation Treaty (NPT), 1968</p> <p>b) Nuclear Weapons-NPT Conventions Overview (Supported Program Level):</p> <p>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.</p> <p>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.</p>
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 Sustainalytics 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 Sustainalytics 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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