

iBoxx Singapore Dollar (SGD) Bond Index Guide

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1) iBoxx Singapore Dollar (SGD) Bond Index

The iBoxx Singapore Dollar (SGD) Bond Index is designed to reflect the performance of Singapore dollar (SGD) denominated debt. The index rules aim to offer a broad coverage of the SGD bond universe, whilst upholding minimum standards of investability and liquidity. The index family forms an integral part of the existing iBoxx index families, which provide the market place with accurate and objective benchmarks by which to assess the performance of bond markets and investments.

Within the iBoxx SGD Overall index, the index family is split into three major sub-families for SGS, sub-sovereign and corporate bonds. These are further broken down into sub-indices based on ratings, maturities and sectors. All iBoxx indices are priced based on multiple data inputs. The iBoxx SGD Index family uses multi-source prices as described in the document *iBoxx Pricing Methodology* publicly available on <https://www.spglobal.com/spdji/en/>.

In order to ensure the independence and the objectivity of iBoxx Singapore Dollar (SGD) Bond Index family, the index rules and their application will be governed by the index committee.

This document covers the index family structure, rules and calculation methodology.

1.1) Index family structure

iBoxx SGD Index		
SGS	Non-sovereigns	
	Sovereigns & Sub-sovereigns	Corporates
	<ul style="list-style-type: none"> • Sovereigns • Sub-sovereigns • Domestic <ul style="list-style-type: none"> > Statutory Boards > Other • Non-Domestic • Agencies • Regions • Supranationals • Other Sub-Sovereigns 	<ul style="list-style-type: none"> • Financials <ul style="list-style-type: none"> > Banks > Financial Services > Insurance > Real Estate • Non-Financials <ul style="list-style-type: none"> > Basic Materials > Consumer Goods > Consumer Services > Health Care > Industrials > Oil & Gas > Technology > Telecommunications > Utilities • Senior / Sub • Perpetuals / Ex-Perpetuals
Rating Indices (Rated, Investment Grade, High Yield, AAA, AA, A, BBB) Maturity Indices (1-3, 3-5, 5-7, 7-10, 10+ years)		

The overall Index is split into a SGS index that includes all domestic government debt, a sub-sovereign Index with quasi-government and a corporates index. Each sub-group is split further into sector indices.

The corporates index is divided into indices for financial and non-financial issues. In addition, sector indices are calculated for financials and non-financials. Industry, super sector are also calculated. The financial sector indices, including banks, insurance and financial services are also split into senior and subordinated debt. Aggregate indices including and excluding perpetuals are also calculated.

Rating and maturity indices are published for most aggregate indices.

1.2) Publication of the index

For all indices, end-of-day closing values are calculated and distributed once daily after the close of trading in the market. The indices are calculated every day except on holidays common to all Asian markets. In addition, the indices are calculated with the previous trading day's close on the last calendar day of each month if that day is not a trading day. S&P DJI publishes an index calculation calendar which is available in the indices section at <https://www.spglobal.com/spdji/en/> under *Calendar*. The iBoxx Singapore Dollar (SGD) Bond Index follows the 'Asia' holiday calendar.

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

Index data is also available from the main information vendors.

2) Bonds selection rules

The following selection criteria are applied to select the constituents for the iBoxx Singapore Dollar (SGD) Bond Index:

- Bond Type
- Issuer Type
- Credit Rating
- Time to Maturity
- Amount outstanding

2.1) Bond type

Only fixed coupon bonds whose cash flows can be determined in advance are eligible for the indices. In particular, the following bond types are eligible:

- Fixed coupon bonds ("plain vanilla bonds")
- Callable & putable bonds
- Amortizing bonds and sinking funds with fixed sinking schedules
- Step-ups and event-driven bonds such as rating-driven or registration-driven bonds
- Dated and undated fixed-to-floater bonds
- Contingent convertible bonds issued by banks or insurance companies
- Zero Coupon Bonds
- Covered bonds

All other bond types are excluded from the Index including:

- Floating rate notes
- 144As and private placements
- Retail bonds. The list of retail bonds is updated every month and published on <https://www.spglobal.com/spdji/en/> under *Indices News*
- Private placements. The list of private placements is updated every month and published on <https://www.spglobal.com/spdji/en/> under *Indices News*
- Inflation and other index-linked bonds
- Structured notes
- Collateralized bonds
- Catastrophe bonds
- Payment-In-Kinds (PIKs)
- Convertibles
- Bonds cum-or ex-warrant
- New bonds entering the index that have already been called prior to rebalancing
- 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/> under *Indices News* 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 analyze the features of such securities in line with the principles set out in 2.1 of this guide. S&P DJI may consult specific Index Committees. Any decision as to the eligibility or ineligibility of a new bond type will be published and the index rules will be updated accordingly.

2.2) Issuer type

Bonds from sovereign, sub-sovereign and corporate issuers are eligible for the indices. The bond classification criteria are detailed in Section 3 of this document.

2.3) Time to maturity

All bonds must have a remaining time to maturity of at least one year at rebalancing. 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) Credit rating

There is no rating requirement. Unrated bonds are eligible for the index.

Defaulted bonds are ineligible for the index. Bonds that are in default or that trade flat of accrued are removed from the index at the first rebalancing following the default/start of trading flat of accrued.

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

If a bond is rated by more than one of the above agencies, then the iBoxx rating is the average of the provided ratings. The rating is consolidated to the nearest rating grade. Rating notches are not used. For more information on how the average rating is determined, please refer to the *iBoxx Rating Methodology* document. The methodology can be found on <https://www.spglobal.com/spdji/en/> under *Methodology*.

For senior debt, if a bond is not rated by any of the three credit rating agencies, the bond's issuer rating applies to the bond if available. Long-term foreign currency issuer ratings will be applied to bonds issued by foreign issuers and long-term local currency issuer ratings will be applied to bonds issued by domestic entities.

Unrated bonds are assigned an implied credit quality based on their yield spreads. The implied credit quality will be used to differentiate bonds into investment grade and high yield as well as to individual rating indices. The implied credit quality methodology is available in a separate document on <https://www.spglobal.com/spdji/en/> under *Methodology*.

Bonds with a rating downgrade to RD/SD will remain eligible the iBoxx Singapore Dollar (SGD) Bond Index until the second rebalancing after the downgrade. If such bonds have not been upgraded by T-3 of the second rebalance following the initial downgrade, they will be removed from the indices. This means RD/SD rated bonds remain eligible in the iBoxx Singapore Dollar (SGD) Bond Index for the first rebalancing after their downgrade to allow for sufficient time to complete a distressed debt exchange or change of terms (assuming they meet all other criteria).

2.5) Amount outstanding and denomination

Eligible bonds must be denominated in SGD. The minimum amount outstanding cut-off for the bonds is:

- SGS: SGD 500 m
- Non-Sovereigns: SGD 150m

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 unclear due to the diversified business of the entity, a decision will be made at S&P DJI's discretion. S&P DJI will assign the S&P DJI 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 bond classifications are published on the FTP server and in the indices section of <https://www.spglobal.com/spdji/en/> for registered users.

3.1) Singapore Government Securities

Bonds issued by the Government of Singapore denominated in SGD

3.2) Sovereigns

Bonds issued by a central government other than the Government of Singapore and denominated in SGD.

3.3) Sub-Sovereigns

Bonds issued by entities with explicit or implicit government backing due to legal provision, letters of comfort or the public service nature of their business. The issuer requires a strong central government ownership/relationship if its bonds are not explicitly guaranteed by the central government.

The five main sub-sovereign sectors are:

- **Agencies:** Bonds issued by entities whose major business is to fulfill a government-sponsored role to provide public, non-competitive services. Often, such business scope is defined by a specific law, or the issuer is explicitly backed by a government.
- **Public Banks:** Bonds issued by publicly owned and backed banks that provide regular commercial banking services (e.g. NV Bank Nederlandse Gemeenten).
- **Regions:** Bonds issued by local governments (e.g. Isle of Man).
- **Supranationals:** Bonds issued by supranational entities, i.e. entities that are owned by more than one central government (e.g. International Bank for Reconstruction and Development).
- **Other Sub-Sovereigns:** All remaining bonds considered sub-sovereign.

Sub-sovereign issuers are further categorized into Domestic and Non-Domestic sectors depending on the domicile of the issuer. As of today Public Banks, Regions and Supra-nationals are purely non-domestic sectors. Domestic Agencies and Other Domestic Sub-sovereigns are split into Statutory Boards and Other Domestic Sub-sovereigns.

- **Statutory boards:** Bonds issued by organizations set up by the Singapore government that have been given autonomy to manage specific areas or oversee new developments in the country. Each statutory

board reports to a government ministry (e.g. PUB). The list of current Statutory Boards is available on www.sgdi.gov.sg

Level0	Level1	Level2	Level3	Level4	Level5	Level6
SGD	Non-Sovereigns	Sovereigns & Sub-Sovereigns	Sovereigns			
			Sub-Sovereigns	Agencies	Domestic	Statutory Boards
						Other
					Non-Domestic	Other
				Public Banks	Non-Domestic	Other
				Regions	Non-Domestic	Other
				Supranationals	Non-Domestic	Other
				Other Sub-Sovereigns	Domestic	Statutory Boards
						Other
					Non-Domestic	Other

3.4) Covered bonds

Bonds which are secured by a general pool of assets in case the issuer becomes insolvent, in particular bonds conforming to the criteria specified in UCITS 22.4 or similar directives, e.g. CAD III. In addition, bonds with a structure affording an equivalent risk and credit profile that are considered by the market as covered bonds are also included in the iBoxx covered bond indices.

3.5) 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 special monoline insurer such as AMBAC or MBIA or through a letter of credit from a non-affiliated bank. The sector overview is shown in the tables below

Table 1: Overview of Markit iBoxx Corporate 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
		Insurance wrapped	*

	Economic Sector	Market Sector	Market Sub-Sector
		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 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 Leisure Goods Personal Goods Tobacco
	Health Care	Health Care	Pharmaceuticals & Biotechnology Health Care Equipment & Services
	Consumer Services	Education	Academic & Educational Services
		Retail	Food & Drug Retailers General Retailers
		Media	Media
		Travel & Leisure	Travel & Leisure
	Telecommunications	Telecommunications	Integrated Telecommunications

	Economic Sector	Market Sector	Market Sub-Sector
	Utilities	Utilities	Wireless Telecommunications
			Electricity
			Gas / Water & Multiutilities
	Technology	Technology	Software & Computer Services
			Technology Hardware & Equipment

3.6) Green Bonds

The index leverages external independent data sources for determining whether a bond is considered 'Green'. The data is provided by Climate Bonds Initiative ("CBI") , Environmental Finance and S&P Global Market Intelligence – BRD and contains self-labelled green bonds under the International Capital Market Association's (ICMA) voluntary Green Bond Principles (GBP) as well as other eligible green bond issuances.

The following criteria are used to identify and classify green bonds:

- Bonds that are labelled green by Climate Bonds Initiative (CBI); or
- Bonds that are self-labelled and externally-reviewed as green according to the Green Bond Principles (GBP) of the International Capital Market Association (ICMA).

All bonds need to have a clear commitment for the use of proceeds. Data is further verified based on publicly available prospectuses and other relevant documents. Bonds for which the classification is pending or unlabeled are excluded from the index.

3.7) Additional classifications

Corporate debt is further classified into senior and subordinated debt.

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. Table below displays the seniority classification of debt issued by both financial and non-financial sectors.

Table 2: Overview of seniority levels for iBoxx Senior & Subordinated indices

Market Sector	Seniority Level 1	Seniority Level 2	Seniority Level 3
Bank	SEN	*	*
	SUB	T2 (post-Jan '13 issuances)	T2 callable
			T2 non-callable
		T2 (pre-Jan '13 issuances)	LT2 callable
			LT2 non-callable
			UT2

Market Sector	Seniority Level 1	Seniority Level 2	Seniority Level 3
		T1	T1 step
			T1 non-step
		AT1	*
Insurance	SEN	*	*
	SUB	T1	*
		T2 perpetual	*
		T2 dated	T2 dated callable
		T2 dated	T2 dated non-callable
		RT1	*
Non-Financial Sectors	SEN	*	*
	SUB	Other	Hybrid
			Non-Hybrid

3.8) Classification review procedure

The issuer classification is reviewed regularly and status changes are included in the indices at the next rebalancing.

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

All iBoxx Singapore Dollar (SGD) Bond Index is rebalanced monthly on the last business day of the month after the close of business. Changes to amounts outstanding are only taken into account if they are publicly known three business days before the end of the month. Changes in ratings are only taken into account if they are publicly known three business days before the end of the month. New bonds issued are taken into account if they are publicly known to settle until the last calendar day of the month.

Four business days before the end of each month, a preliminary membership list is published on the FTP server and in the *Indices* section on <https://www.spglobal.com/spdji/en/> under *Data* → *Bond List Preview* for registered users.

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

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

A sub-index is calculated if at least one bond matches all inclusion criteria. If no more 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.

Calculation occurs on a daily basis as soon as the prices become available. The indices are calculated every Monday to Friday. The indices are also calculated on the last calendar day of each month irrespective of holidays and weekends.

The calculation of the indices is based on bid prices. New bonds are included in the indices at their respective ask prices when they enter the index family. In the event that no price can be established for a particular bond, 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 the index committee at the following

rebalancing date. To ensure consistency, decisions taken are made publicly available on a timely basis and S&P DJI has the ability to refer back to previous cases.

On the last trading day of a month, the rebalancing takes place after the daily index calculation for the current month's list, including the calculation of the last calendar day's indices, has been performed.

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) Weighting

The bonds in the index are market capitalization weighted. Unrated bonds are included in the index at 50% of its full notional

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.

4.8) Index and analytics weightings

The iBoxx Singapore Dollar (SGD) Bond Index is volume-weighted indices, with a bond's base market value as the weighting factor. The base market value and amount outstanding of a bond are only adjusted within the monthly re-balancing process at the end of each month. However, scheduled redemption payments for amortizing bonds and sinking funds are taken into account when they occur, as they are affecting the index return and analytical values. In addition, bonds that are fully redeemed intra-month are also taken into account immediately. Therefore, the indices are calculated using the amount outstanding adjusted for increases as well as repurchases that took place during the month.

All calculations are based on the adjusted amount outstanding that reflects the outstanding bond notional at the last rebalancing.

4.9) Scheduled partial redemptions: sinking funds and amortizing bonds

Amortizing bonds are 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 outstanding amount of the bond. *Sinking funds* are bonds, where 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 may be purchased on the open market and thus retired. Interest payments are made on the remaining outstanding bonds.

For the two bond types above, price and accrued interest are quoted and calculated to the actual amount outstanding (par). Scheduled redemptions within the period are taken into account immediately. Coupon payments, however, refer to the scheduled amount outstanding over the last coupon period; scheduled redemptions within the month are not taken into account.

4.10) 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.

4.11) 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).

4.12) Maturity extension

4.12.1) 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.

4.12.2) 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

4.13) 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.

4.14) 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.

4.15) Index history

The Index history starts on 30 June 2012. The index has a base value of 100 on that date.

4.16) Settlement conventions

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

4.17) Data publication and access

The table below summarises the publication of iBoxx Singapore Dollar (SGD) Bond Index at <https://www.spglobal.com/spdji/en/> for registered users and on the FTP server.

Table 3: Frequency, File type and Access

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

4.18) 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) Summary of key ESG factors

Explanation of how ESG factors are reflected in the key elements of the benchmark methodology	
Item 1: Benchmark administrator	IHS Markit Benchmark Administration Ltd. ('IMBA UK')
Item 2: Type of benchmark	Fixed income
Item 3: Name of benchmark or family of benchmarks	iBoxx Singapore Dollar (SGD) Bond Index
Item 4: Does the benchmark methodology take into account ESG factors	Yes
Item 5a: List of Environmental factors considered	Inclusion driven by exposure to the following factors:
	Use of proceeds for Green Bonds have to be aligned with the ICMA Green Bond principles. Evidence is based on self-certification
Item 5b: List of Social factors considered	Inclusion driven by exposure to the following factors:
	Use of proceeds for Social Bonds have to be aligned with the ICMA Social Bond Principles. Evidence is based on self-certification
Item 5c: List of Governance factors considered	N/A
Item 5d: List of any other overall ESG factors	N/A
Item 6: Hyperlink to ESG factors information	iBoxx Singapore Dollar (SGD) Bond Index
Item 7a(i): Source of input	Data is sourced externally from Climate Bonds Initiative ("CBI"), Environmental Finance and S&P Global Market Intelligence – BRD, supplemented with professional expertise and bond prospectuses.
Item 7a(ii): Data input	Climate Bonds Initiative ("CBI"), Environmental Finance and S&P Global Market Intelligence – BRD relies on a proprietary methodology informed by a range of data sources.
	CBI track all self-labelled green bonds, subject to screening criteria explained in CBI Green Bond Database Methodology. All data is collected by the Climate Bonds Initiative and is filtered to include only: <ul style="list-style-type: none"> • bonds with at least 95% use of proceeds financing or refinancing green/environmental projects - social bonds are not included • bonds which are broadly aligned with the Climate Bonds Taxonomy. This means that, for example, bonds financing so-called "clean coal" are excluded.
	Environmental Finance's database tracks self-labelled green, social and sustainability bond. The dataset includes bonds where the issuer and/or lead manager explicitly states that they are green, social or sustainability focused.
	S&P Global Market Intelligence – BRD offers detailed reference data for bonds which enables a comprehensive view of assets from issuance to maturity. Self-labelled green, social and sustainability bonds are captured based on information provided in the bond prospectus.

Item 7b: Verification and quality of data	<p>For further information on Environmental Finance research and methodology refer https://efdata.org/pages/methodology. The CBI Green Bond Database screening process is available at https://www.climatebonds.net/files/files/Taxonomy/CBI_Taxonomy_Tables-08A%20%281%29.pdf</p> <p>For further information on S&P Global Market Intelligence – BRD refer to https://www.spglobal.com/marketintelligence/en/mi/products/pricing-and-reference-data.html .</p>
	ICMA Green Bond Principles (GBP), Social Bond Principles (SBP) and Sustainability Bond Guidelines (SBG)
Item 8a: Information updated on	9 January 2023
Item 8b: Reason for update	Regulatory Reporting Rules

6) Governance and regulatory compliance

IHS Markit Benchmark Administration Limited (IMBA UK) is the Index Administrator of iBoxx indices. Information on IMBA UK's governance and compliance approach can be found [here](#). This document covers:

- Governance arrangements, including external committees
- Input data integrity
- Conflicts of interest management
- Market disruption and Force Majeure
- Methodology changes and cessations
- Complaints
- Errors and restatements
- Reporting of infringements and misconduct
- Methodology reviews
- Business continuity

More details about IMBA UK can be found on the [Administrator's website](#).

7) Changes to the iBoxx SGD Bond Index Family

Date	Change
31 Oct 2023	Annual Index Review 2023 <ul style="list-style-type: none"> Index eligibility of zero coupon bonds and covered bonds
30 Jun 2023	Annual Index Review 2022 <ul style="list-style-type: none"> Introduction of 'Maturity extension' section Index eligibility of bonds with extended workout dates Creation of 'Renewable Energy Sector' within the 'Corporates' classification Distressed Debt Exchanges – Rule Update
30 Nov 2022	Annual Index Review 2022 <ul style="list-style-type: none"> Introduction of green bonds sub-indices for the iBoxx SGD overall
31 Mar 2022	Annual Index Review 2021 <ul style="list-style-type: none"> Introduction of new market sector classification "Education" with market sub-sector classification "Academic & Educational Services"
01 Sep 2021	update of monthly forward start date from 12th calendar day to 10th calendar day
31 Mar 2021	Governance and Regulatory Compliance section added
31 Oct 2020	Inclusion of contingent convertible AT1 securities
31 Jul 2020	Annual Index Review 2019 <ul style="list-style-type: none"> Introduction of updated corporate classification schema Implementation of updated Tier Classification Updates as part of the changes in definition and treatment of hybrid bonds
31 Jan 2020	Classification definition update for 'Other Sub-Sovereigns'
30 Nov 2018	Classification schema updated for 'Real Estate' and 'Financial Services'
22 Dec 2017	Addition of iBoxx Tier classification of subordinated debt issued by Banks & Insurance entities
31 Oct 2017	Annual Index Review 2017 <ul style="list-style-type: none"> Introduction of additional maturity sub-indices for the iBoxx SGD overall
22 Mar 2016	<ul style="list-style-type: none"> Added classification for Guaranteed and Wrapped
1 Oct 2014	<ul style="list-style-type: none"> Added Index Restatement and Complaints Sections Additional Clarification on bond eligibility, classification and corporate actions
25 Jun 2013	<ul style="list-style-type: none"> Launch of the iBoxx SGD Index

8) Further information

Client support

For client support please contact:

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Phone:	Asia Pacific	Japan: Singapore:	+81 3 6402 0127 +65 6922 4210
	Europe	General: UK:	+800 6275 4800 +44 20 7260 2111
	USA	General:	+1 877 762 7548

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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 indices@ihsmarkit.com.

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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. 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.

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