

# **iBoxx CICC USD China Cross-Border Index Guide**

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# 1 iBoxx CICC USD China Cross-Border Index

The iBoxx CICC USD China Cross-Border Index family is derived from the iBoxx USD Asia ex-Japan index family and is designed to reflect the performance of USD denominated investment grade and high yield bonds issued by Chinese entities that also have bonds outstanding domestically in the China onshore market.

The iBoxx CICC USD China Cross-Border Index family is comprised of 3 indices: iBoxx CICC USD China Cross-Border Overall Index, iBoxx CICC USD China Cross-Border Investment Grade Index and iBoxx CICC USD China Cross-Border High Yield Index.

The index rules aim to offer a broad coverage of the universe for Chinese USD denominated bonds, whilst upholding minimum standards of investability and liquidity. The indices are an integral part of the global iBoxx index families, which provide the marketplace with accurate and objective reference indices by which to assess the performance of bond markets and investments.

The indices are derived from the iBoxx USD Asia ex-Japan index family and follow the basic rules of iBoxx USD Asia ex-Japan except with regards to the selection of qualifying issuers for the index. All iBoxx indices are priced based on multiple data inputs. The iBoxx CICC USD China Cross-Border Index family uses multi-source prices as described in the *iBoxx Pricing Methodology* publicly available on <https://www.spglobal.com/spdji/en/> under *Methodology*.

This document covers the index rules and calculation methodology.

## 1.1 Index family structure

The iBoxx CICC USD China Cross-Border Overall Index is divided into 2 broad categories based on issuer ratings i.e., iBoxx CICC USD China Cross-Border Investment Grade Index and iBoxx CICC USD China Cross-Border High Yield Index.

## 1.2 Publication of the Index

All indices are calculated at the end of each business day and re-balanced at the end of each month. The indices are calculated on the basis of end-of-day prices on each trading day defined in the iBoxx USD Asia ex-Japan Index calculation calendar. The index calculation calendar is available in the indices section on <https://www.spglobal.com/spdji/en/> under *iBoxx Indices Calendars* for data subscribers. The index is calculated for the Asian end-of-day. The approximate publication time for the Asian end-of-day is 7 pm HKT/SGT. Index data and bond price information is also available from the main information vendors. The Asian end-of-day indices are rebalanced using the Asian end-of-day prices from the last business day of the month.

The index calculation calendar conforms to the recommendations of the Securities Industry and Financial Markets Association (SIFMA):

- Pricing for domestic and global bonds takes place on each SIFMA recommended US trading day
- Pricing for Eurodollar bonds takes place on each SIFMA recommended UK trading day (additional holidays to the US calendar: Easter Monday, May Day, Summer Bank Holiday and Boxing Day)
- The indices are calculated on each SIFMA recommended US trading day and on the last calendar day of each month

## 2 Bond Selection rules

The iBoxx CICC USD China Cross-Border Index family captures USD-denominated debt from Mainland Chinese issuers issued in the international USD bond market. Further the selection criteria used to determine the index constituents follows broadly below three categories:

- Issuer origin
- Bond selection
- Issuer selection

### 2.1 Issuer origin

#### 2.1.1 Market selection

Only issuers from Mainland China are eligible for the indices.

### 2.2 Bond selection

The following selection criteria are used to determine the index constituents from the USD denominated bond universe:

#### 2.2.1 Issuer type

Only bonds issued by corporate or sub-sovereign issuers are eligible for the index. The sub-sovereign issuers include (but are not limited to) agencies and local governments as well as certain state-owned enterprises depending on the level of state support and commitment. All new issuers are classified according to the classification scheme outlined in section 3.

#### 2.2.2 Bond type

General inclusion criteria:

- Bonds with known cash-flows are eligible for the indices

In particular, the following bond types are eligible:

- Fixed coupon bonds
- Zero coupon bonds
- Callable and puttable bonds
- Covered bonds
- Step-ups and event-driven bonds such as rating-driven or registration-driven bonds
- Amortizing bonds and sinking funds with fixed sinking schedules
- Perpetuals and fixed-to-float bonds with a reset date at or after the first call date
- Contingent convertible and other Basel III compliant AT1 and T2 capital with mandatory conversion / write down with pre-specified objective trigger
- Preference share-style AT1s
- Extended bonds as defined under section 'Maturity extension' in this document

The following bond types are specifically excluded:

- Floating Rate Notes
- 144As and private placements
- Retail bonds
- Inflation and other index-linked bonds
- Structured notes
- Other collateralized bonds (excl. covered) brady bonds
- Catastrophe bonds
- Payment-In-Kinds (PIKs)
- Optional and mandatory convertible bonds
- Perpetuals and fixed-to-float bonds with a reset date prior to the first call date
- Subordinated bank or insurance debt with non-regulatory conversion options before the first call date
- Bonds cum- or ex-warrant
- New bonds entering the index that have already been called prior to rebalancing

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

In instances where a new bond type is not specifically excluded or included according to the published index rules, S&P DJI will analyze the features of such securities in line with the principles set out in 2.2.2 of this guide. S&P DJI may consult the specific Index Committees. Any decision as to the eligibility or ineligibility of a new bond type will be published and the index rules will be updated accordingly.

### **2.2.3 Time to maturity**

There is no minimum remaining time to maturity rule. 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.

Dated and undated fixed-to-floater bonds are removed from the index on the last rebalancing prior to the reset date unless they have already been called.

### **2.2.4 Credit rating**

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

Bonds with a rating downgrade to RD/SD will remain eligible 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 CICC USD China Cross-Border 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).

Ratings from the following three credit rating agencies are considered for the calculation of the iBoxx Rating for rated bonds:

- 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 Rules. The methodology can be found at <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 at <https://www.spglobal.com/spdji/en/> under *Methodology*.

### **2.2.5 Amount outstanding**

All the eligible bonds must be denominated in USD and the minimum outstanding amount required is USD 250m.

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

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

### **2.2.6 International clearability**

Bonds need to be clearable via one of the following three clearing venues:

- Clearstream
- Euroclear
- Hong Kong CMU

## **2.3 Issuer selection**

### **2.3.1 iBoxx CICC USD China Cross-Border Overall Index**

Only issuers that themselves or through a parent/subsidiary have outstanding bonds in the onshore RMB bond market are eligible for the index. The index considers bonds traded in the Interbank bond market as well as exchange-traded bonds.

If the issuer does not have outstanding bonds in the onshore market, outstanding onshore bond issuances by parents/subsidiaries of the issuer are also considered (“issuer group”). The following principles are used to identify qualifying parents/subsidiaries:

- The issuer and its parent/subsidiary need to be owned and controlled by the same ultimate parent within the issuer group
- Issuer group scope
  - > For non-government owned groups, the ultimate parent defines the limit of the issuer group
  - > For government-owned groups, the last non-government entity is considered the ultimate corporate parent. For instance, for LGFVs, the local SASAC would be considered a government parent, but entities owned by the SASAC would be considered corporate parents. The highest corporate parent defines the limit of issuer group
  - > For issuers guaranteed by a SASAC or a government entity, the guarantor itself is considered an eligible parent, but no other entities owned or controlled by the guarantor are within the issuer group scope
- Identifying eligible parents/subsidiaries within an issuer group
  - > Parents within the issuer group are generally considered eligible
  - > Immediate subsidiaries of the issuer (or in the case of an SPV the guarantor) are generally considered eligible
  - > Other subsidiaries of the issuer (or in the case of an SPV the guarantor) and subsidiaries of a parent of the issuer (or in the case of an SPV the guarantor) are considered if they operate in a similar business line

Issuers that are already eligible for the iBoxx CICC USD China Cross-Border Overall index remain eligible for the index even if the issuer group has no current debt outstanding in the onshore RMB Bond market as long as the maturity date of the most recently matured onshore bond is within 6 months of the index rebalancing.

New issuers only become eligible for the iBoxx CICC USD China Cross-Border Overall index if the longest dated onshore bond from the issuer group has a time to maturity of at least 6 months.

### **2.3.2 iBoxx CICC USD China Cross-Border Investment Grade index**

In addition to the selection rules detailed in section 2.2 and section 2.3.1, only bonds that have an iBoxx rating of BBB and above are eligible for the index.

### **2.3.3 iBoxx CICC USD China Cross-Border High Yield index**

In addition to the selection rules detailed in section 2.2 and section 2.3.1, only bonds that have an iBoxx rating of BB and below are eligible for the index.

# 3 Bond classification

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

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

Where the sector classification of a specific entity is not 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 Sovereigns

Bonds issued by a central government and denominated in USD.

## 3.2 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 the issuer's business. The issuer requires a strong central government ownership/relationship if its bonds are not explicitly guaranteed by the central government.

The four main sub-sovereign sectors are:

- **Agencies:** Bonds issued by entities with a major focus on government-sponsored, public, non-competitive services. The issuers are financial in nature and carry out government policies through special development programs, often explicitly government-backed or with a business scope defined by a specific law.
- **Supranationals:** Bonds issued by supranational entities, i.e. entities that are owned by more than one central government (e.g. World Bank, EIB).
- **Local Government:** Bonds issued by local governments (e.g. Province of Manitoba, Canada).
- **Other Sub-Sovereigns:** All remaining bonds considered sub-sovereign, classified into the following three main categories:
  - > **Non-Financials:** Bonds issued by entities from the non-financial sector with an explicit or strong implicit debt guarantee from the state. The issuer's credit rating is closely correlated to the sovereign rating and expresses a strong credit uplift based on a high level of government support. S&P DJI expects the issuer's credit rating to be no worse than on par or two notches below the sovereign rating. A 'strong implicit guarantee' means the issuer is 100% owned by the state or public sector with its debt consolidated into state public debt, or the issuer has preexisting access to government financing or funding derived from tax revenues. State-owned issuers that are profit-

oriented, provide competitive services, and operate under a regulatory framework are considered Corporates.

- > *Guaranteed Financials*: A specific bond issued by a private sector financial institution that is irrevocably guaranteed by a government. Most of these bonds are issued under programs set-up after the 2008 financial crisis.
- > Bonds issued by unguaranteed institutions with an irrevocable and explicit guarantee by a central government that covers amount and timeliness of all interest and principal payments until the maturity of the bond.

### 3.3 Collateralized

#### 3.3.1 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 indices.

### 3.4 Corporates

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

**Table 1: Overview of Markit iBoxx Corporates Sectors**

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

|  | Economic Sector    | Market Sector               | Market Sub-Sector                 |
|--|--------------------|-----------------------------|-----------------------------------|
|  |                    | 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                   |
|  |                    |                             | Personal Goods                    |
|  |                    |                             | Tobacco                           |
|  |                    |                             | Leisure Goods                     |
|  | Health Care        | Health Care                 | Pharmaceuticals & Biotechnology   |
|  |                    |                             | Health Care Equipment & Services  |
|  | Consumer Services  | Retail                      | Food & Drug Retailers             |
|  |                    |                             | General Retailers                 |
|  |                    | Media                       | Media                             |
|  |                    | Travel & Leisure            | Travel & Leisure                  |
|  |                    | Education                   | Academic & Educational Services   |
|  | Telecommunications | Telecommunications          | Integrated Telecommunications     |
|  |                    |                             | Wireless Telecommunications       |
|  | Utilities          | Utilities                   | Electricity                       |
|  |                    |                             | Gas / Water & Multiutilities      |
|  | Technology         | Technology                  | Software & IT Services            |
|  |                    |                             | Technology Hardware & Equipment   |

### 3.5 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 is rebalanced monthly on the last business day of the month. Any inclusion after the index cut-off day (t-3) will not be considered in the re-balancing process, but will become effective at the end of the following month. New bonds issued are taken into account if they are publicly known to settle until the last calendar day of the month, inclusive, and if their rating and amount outstanding has become known at least three trading days before the end of the month.

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

Two business days before the end of each month, the rating and amount information for the constituents is updated and the list is adjusted for all rating and amount changes which are known to have taken place three business days before the end of the month which could also result in exclusion of the bond. However, if bonds which are part of broader USD indices become eligible into the index two business days prior to rebalancing because of rating and/or amount changes, will be included in the index.

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

### 4.3.1 Weekly previews

In addition to the regular monthly rebalancing, a preview list (including sector classification for new bonds) is published each Friday with predicted changes to the index constituents at the next rebalancing. The preview list includes the next month's index constituents based on information available on such Fridays. First weekly preview will be published on the Friday that is three business days after the previous month-end rebalance.

## 4.4 Index data

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

A sub-index is calculated if at least one bond matches all inclusion criteria. If no bonds qualify for an index, then its level remains constant. If at least one bond becomes available again, the index calculation resumes and is chained to the last calculated level. All bonds are assigned to sub-indices according to their classification. The assignment of a bond to a certain maturity bucket is based on its expected remaining life. All bonds remain in their maturity bucket for the entire month. All top-level indices are computed and disseminated Monday to Friday (except during common US trading holidays). They are based on US end of day prices. The indices are also calculated on the last calendar day of each month irrespective of holidays and weekends. If the indices are calculated on a day that is a non-business day, then the prices from the previous trading day will be carried forward and the index will be calculated using those prices and the current accrued interest and coupon payment data.

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

## 4.5 Index calculus

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

## 4.6 Treatment of the special intra-month events

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

### 4.6.1 Index and analytics weights

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

Definitions:

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

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

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

#### **4.6.2 Funged bonds**

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

##### **4.6.2.1 Parent and new tranche are both index constituents**

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

##### **4.6.2.2 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

##### **4.6.2.3 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

#### **4.6.3 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.

#### **4.6.4 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).

#### **4.6.5 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.

#### 4.6.6 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.

#### 4.6.7 Maturity extension

##### 4.6.7.1 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

#### 4.6.7.2 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 Index history

The Index history starts on 31 December 2017. The indices have a base value of 100 on that date.

#### 4.8 Settlement conventions

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

#### 4.9 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.

#### 4.10 Data publication and access

The table below summarizes the publication of iBoxx CICC USD China Cross-Border Index in the *Indices* section of the webpage for registered users and on the FTP server.

**Table 3: Data publication frequency, file types and access**

| Frequency  | File Type                    | Access   |
|--|------------------------------|--|
| Daily  | Underlying file – Bond level | FTP Server   |
|  | Indices files – Index level  | FTP Server / website / Bloomberg (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 files               | FTP Server / website                                 |
| Weekly (On Friday)**   | Preview components           | FTP Server / website                                 |
| T - 4  | Preview components           | FTP Server / website                                 |
| T - 3  | Preview components           | FTP Server / website                                 |
| Monthly  | End of month components      | FTP Server / website                                 |
|  | XREF files                   | FTP Server   |

**\*\*Previews will be published on the first Friday that is three business days after the previous month-end rebalance.**

#### **4.11 Index review**

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

## 5 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
- 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](#).

# 6 Changes to iBoxx CICC USD China Cross-Border Index

|             |   |
|-------------|---|
| 01 May 2024 | <b>Annual Index Review 2023</b> <ul style="list-style-type: none"> <li>• Update to Agencies' Classification Definition               <ul style="list-style-type: none"> <li>&gt; Updated definition of 'Agencies'</li> <li>&gt; Updated definition for 'Other Sub-Sovereigns'</li> </ul> </li> </ul>  |
| 30 Jun 2023 | <b>Annual Index Review 2022</b> <ul style="list-style-type: none"> <li>• Introduction of 'Maturity extension' section</li> <li>• Index eligibility of bonds with extended workout dates</li> <li>• Creation of 'Renewable Energy Sector' within the 'Corporates' classification</li> <li>• Distressed Debt Exchanges – Rule Update</li> </ul> |
| 14 Nov 2022 | Launch of iBoxx CICC USD China Cross-Border Index Family  |

# 7 Further information

## **Client support**

For client support please contact [index\\_services@spglobal.com](mailto:index_services@spglobal.com).

## **Formal complaints**

Formal complaints should be emailed to [spdji\\_compliance@spglobal.com](mailto:spdji_compliance@spglobal.com).

Please note: [spdji\\_compliance@spglobal.com](mailto: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](mailto:index_services@spglobal.com).

# Disclaimer

## Performance Disclosure/Back-Tested Data

Where applicable, S&P Dow Jones Indices and its index-related affiliates (“S&P DJI”) defines various dates to assist our clients by providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index’s Launch Date are considered back-tested. S&P DJI defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company’s public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed “Date of introduction”) is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index’s public release date.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Information presented prior to an index’s launch date is hypothetical back-tested performance, not actual performance, and is based on the index methodology in effect on the launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Also, the treatment of corporate actions in back-tested performance may differ from treatment for live indices due to limitations in replicating index management decisions. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate certain ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using “Backward Data Assumption” (or pulling back) of ESG data for the calculation of back-tested historical performance. “Backward Data Assumption” is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as “product involvement”) were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on “Backward Data Assumption” please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used. Index returns shown do not

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