



Markit iBoxx USD Benchmark Index Guide

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1 Markit iBoxx USD Benchmark Indices

The Markit iBoxx USD Index family is designed to reflect the performance of USD denominated investment grade debt. The index rules aim to offer a broad coverage of the USD bond universe, whilst upholding minimum standards of investability and liquidity. As of 31 December 2017, the index tracks more than 6700 bonds with about USD 16 trillion worth of debt. The indices are an integral part of the global Markit 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 Markit iBoxx USD Index family is split into three major indices: Overall, Domestic and Eurodollar. These are further broken down into sub-indices based on sector, rating and maturity. All iBoxx indices are priced based on multiple data inputs. The Markit iBoxx USD Benchmark Index family uses multi-source prices as described in the document *Markit iBoxx Pricing Rules* publically available under methodology on www.markit.com/Documentation/Product/iBoxx. Additionally, the index rules and their application are governed by two Index Advisory Committees.

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

1.1 Index Family Structure

The iBoxx USD Indices are targeted for both domestic and international investors. In order to address the different needs of investors, the overall index is split into three discrete sub-indices. Bonds are classified to conform to other standard iBoxx index families, such as the EUR and GBP indices. The table below shows the iBoxx USD Index structure:

Markit iBoxx USD Overall			
Treasuries	Sovereigns & Sub-Sovereigns	Corporates	Collateralized
	<ul style="list-style-type: none"> ● Sovereigns ● Sub-Sovereigns ● Agencies <ul style="list-style-type: none"> > US Agencies > Non-US Agencies ● Local government ● Supranationals ● Other Sub-Sovereigns 	<ul style="list-style-type: none"> ● Financials ● Non-Financials ● Industries ● Sectors ● Senior/Sub 	<ul style="list-style-type: none"> ● Covered

Rating and Maturity Indices

- Ratings (AAA, AA, A, BBB)
- Maturity (1-3, 3-5, 5-7, 7-10, 10-15, 1-5, 5-10, 1-10, 10+, 15+)

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 and sector indices are also calculated. The financial sector indices, including banks, insurance, financial services, guaranteed

& wrapped and real estate are also split into senior and subordinated debt. The Overall Index is split into a Treasuries Index that includes all domestic government debt, a Sub-sovereign Index with quasi-government debt and Corporates. Each sub-group is split further into sector indices.

Rating and maturity indices are published for most aggregate indices.

The bond classification scheme is shown in Section 3.1 Overall Bond Classification. Level 0 refers to the Overall Index, Level 1 to the market issue of the bond, Level 2 to the split between Treasuries and Non-Treasuries, Level 3 to the Non-Treasuries sub-groups of Corporates and Sub-sovereigns, while Levels 4 to 8 and Debt / Tier indicate the relevant sub-index classifications. Bonds are assigned to an index using the classification levels in Section 3.

1.2 Index governance

In order to ensure the independence and the objectivity of the Markit iBoxx USD Benchmark Index, the index rules and their enforcement will be governed by two distinct Index Advisory Committees, in line with the governance structure for the main iBoxx index families.

1.2.1 Technical Committee

The Technical Committee is composed of representatives from market makers/banks. The main purpose of this group is to provide assistance in the identification of eligible constituents, especially in the instance where the eligibility or the classification of a bond is unclear or contentious. Additionally, the Technical Committee discusses any market developments which may warrant index rule changes, and provide recommendations on changes to the rules or additional indices. It also reviews the impact of financial sanctions on the eligibility of countries or specific index constituents.

1.2.2 Oversight Committee

The Oversight Committee is comprised of representatives from a broad range of asset managers, consultants and industry bodies. The purpose of this committee is to review the recommendations made by the Technical Committee and also to provide consultation on any market developments which may warrant rule changes.

1.3 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 Index calculation calendar. The index calculation calendar is available in the indices section on www.markit.com/indices under Calendar for data subscribers. Index data and bond price information is also available from the main information vendors.

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

- Market Issue
- Bond Type
- Rating
- Time to maturity
- Amount outstanding

Additional selection criteria for the three sub-groups Domestic, Eurodollar and Overall Indices are described in sections 2.6 and 2.7.

2.1 Market Issue

The domicile of the issuer is not relevant for bond selection. However, for liquidity reasons, the following market types are excluded from the bond universe:

- Municipal Bonds
- 144As
- Private Placements
- Brady Bonds
- Restructured sovereign and sub-sovereign debt

If the technical committee has reasonable cause to believe that a bond is retail bond or private placement, and IHS Markit is unable to determine otherwise from the issuer or lead manager(s), the bond will be excluded from the index.

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
- Callable and puttable bonds
- Step-ups and event-driven bonds such as rating-driven or registration-driven bonds
- Amortizing bonds and sinking funds with fixed sinking schedules
- Fixed-to-floater hybrid bank/insurance capital bonds
- Senior fix-to-float bonds issued by banks with a call option up to 2 years prior to maturity
- Perpetual callable bonds

- Financial subordinated debt with a contingent conversion feature at the point of non-viability, in line with the capital adequacy requirements of Basel III
- Secured bonds
 - > Secured bonds issued by insurance companies
 - > First mortgaged bonds/ first priority security interest
 - > Covered bonds (please refer to section 3.5.1)
 - > Secured bonds issued by an SPV with known cash-flows

The following bond types are specifically excluded:

- Floating Rate Notes
- Zero coupon bonds and zero-coupon step-up bonds
- Fixed to floater bonds issued by non-financial issuers
- Fixed to floater senior bonds issued by non-banking financial issuers
- Convertibles
- Inflation and other index-linked bonds
- Bonds cum or ex-warrant
- Bonds whose complete coupons are paid at maturity, as they are similar to zero-coupon bonds with only one cash flow
- New bonds entering the index that have already been called prior to rebalancing
- Optional and mandatory convertible bonds
- Subordinated bank or insurance debt with mandatory contingent conversion features that are based on an observable trigger

For retail bonds and private placements, publicly available information is not always conclusive and the classification of a bond as a retail bond or a private placement will be made at IHS Markit's discretion based on the information available at the time of determination. IHS Markit may consult with the specific Index Advisory Committees to review potential retail bonds or private placements. 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 www.markit.com/indices 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, IHS Markit will analyse the features of such securities in line with the principles set out in 2.1 of this guide. IHS Markit may consult the specific Index Advisory Committees. Any decision as to the eligibility or ineligibility of a new bond type will be published and the index rules will be updated accordingly.

US treasuries, whose auction results are made available on T-3, T-2 or T-1 settling in the current month, will be added to the preview list scheduled after the issuance announcement with "When Issued" terms. The "When Issued" terms will be replaced with the final details as soon as the results are available.

2.3 Credit rating

All bonds in the Markit iBoxx USD Benchmark 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.

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 www.markit.com/Documentation/Product/iBoxx under *Methodology*.

US Treasuries require US sovereign rating. For corporate and sub-sovereigns only issue ratings are considered in the bond selection process. For sovereign issuers the country rating is also taken into account. Issuer ratings or MTN program ratings are not taken into account.

2.4 Time to Maturity

To be included in the iBoxx USD Indices, all bonds must have a minimum time to maturity at issuance of 18 months. Extendable bonds whose maturities are extended also require a minimum time to maturity of 18 months from the extension.

In addition, all bonds must have a remaining time to maturity of at least one year on the rebalancing day. Index constituents are removed from the indices at the next re-balancing when their time to maturity falls below one year.

The time to maturity is considered the average life of the bond, or it can be considered the time from the first settlement date to the:

- Final maturity date for non-hybrid capital bullet bonds
- First call date for hybrid capital

Bonds are assigned to a maturity bucket according to their time to maturity. For non-hybrid capital bonds, the call/put schedule is not used to determine the time-to-maturity of the bond, regardless whether the call/put has been announced.

2.5 Amount Outstanding

All bonds require a specific minimum amount outstanding in order to be eligible for the indices, as shown below. The figures indicate minimum issue sizes.

- US Treasuries: USD 1 bn
- Sub-sovereigns: USD 500 m
- Corporates: USD 500 m
- Collateralized: USD 500 m

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.

2.6 Additional Information on the Markit iBoxx USD Domestic Indices

2.6.1 Index Structure

Only domestic and global bonds qualify for these indices (Level 1 classification “D” or “G”). In addition to the standard iBoxx Indices, several aggregate indices are calculated. Bonds with a Level 3 classification of “Sovereigns & Sub-sovereigns” or “Corporates” are included in the iBoxx USD Non-Treasuries Index. The iBoxx USD Credit Index includes all Non-Treasuries except “US Agencies”.

2.6.2 Additional Selection Criteria for iBoxx USD Domestic Indices

Market Issue

The following market issues from the full universe are not eligible:

- Eurodollar and Euro MTN (including RegS)

Bond Type

The following bond types from the full universe are not eligible:

- Undated hybrid capital
- Hybrid and non-hybrid fixed-to-floater bonds

2.7 Additional Information on the Markit iBoxx USD Eurodollar Indices

2.7.1 Selection Criteria

Only Eurodollar, EuroMTN and global bonds qualify for these indices (Level 1 classification “E” or “G”). In addition to the standard sub-indices, bank subordinated debt is further detailed into the Tier of subordination.

2.7.2 Additional Selection Criteria for iBoxx USD Eurodollar Indices

Market Issue

The following market issues from the full universe are not eligible:

- US Domestic, Domestic MTN and Yankees

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 IHS Markit, 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 IHS Markit's discretion. IHS Markit will assign the IHS Markit classification according to its evaluation of the business risk presented in the security prospectus and annual reports, if available. IHS Markit will also compare the classification to peers in the potential sectors and may consult with the Index Advisory Committees. Membership lists including classification are published on the FTP server and in the *Indices* section on www.markit.com for registered users.

3.1 Treasuries

Bonds issued by the US government and denominated in USD.

3.2 Sovereigns

Bonds issued by a central government and denominated in USD.

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 four main sub-sovereign sectors are:

- **Agencies:** Bonds issued by entities whose major business is to fulfil a government-sponsored role to provide public, non-competitive services (e.g. Fannie Mae). Often, such business scope is defined by a specific law, or the issuer is explicitly backed by the government.
- **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. There are three main types of bonds and issuers falling into this category:
 - > *Non-Financials:* A government backed issuer from a non-financial sector such as public utilities.

- > *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 programmes 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.

3.4 Collateralized

3.4.1 Covered bonds

Bonds secured by mortgages, public sector debt, MBS or a general pool of assets. In the event of issuer default, covered bond investors have preferential claim against pool of collateral for the bond. 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 Markit iBoxx covered bond indices.

The following bond types are included in the Markit iBoxx USD Covered indices:

- Australia, Canada, France, Germany, Ireland, Luxembourg, Netherlands, Norway, Singapore, South Korea, Spain, Sweden, UK and Contractual Covered.

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 insurance-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. 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	Financials	Banks	Banks
		Insurance	Life Insurance
			Non-life Insurance
		Financial Services	General Financial
			Equity Investment Instruments
			Nonequity Investment Instruments
		Real Estate	Real Estate Investment & Services
Real Estate Investment Trusts			

		Guaranteed & Wrapped	*
Non-Financials	Oil & Gas	Oil & Gas	Oil & Gas Producers Oil Equipment / Services & Distribution
	Basic Materials	Chemicals Basic Resources	Chemicals Industrial Metals Mining Forestry & Paper
Industrials	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
		Health Care	
Consumer Services	Retail	Food & Drug Retailers General Retailers	
		Media	Media
	Travel & Leisure	Travel & Leisure	
Telecommunications	Telecommunications	Fixed Line Telecommunications Mobile Telecommunications	

Utilities	Utilities	Electricity
		Gas / Water & Multi utilities
Technology	Technology	Software & Computer Services
		Technology Hardware & Equipment

3.6 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 bank debt which is :

- Subject to write-down or conversion into a subordinated instrument on the occurrence of a resolution event.
- 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. Table 2 below displays the seniority classification of debt issued by both financial and non-financial sectors.

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

Market Sector	Seniority Level 1	Seniority Level 2
Bank	SEN	Preferred
		Bail-in
	SUB	Lower Tier 2 (LT2)
		Upper Tier 2 (UT2)
Other Financial Sectors	SEN	*
	SUB	Other
Other Sectors	*	*

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 *Markit iBoxx Pricing Rules* document, available in the *Methodology* section of the Markit iBoxx Documentation page on www.markit.com/Documentation/Product/IBoxx.

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.

Three business days before the end of each month one preliminary list of eligible bonds is published in addition to the weekly previews mentioned below.

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 preview

In addition to the regular monthly re-balancing, a preview list (including sector classification for new bonds) is published each Thursday with predicted changes to the index constituents at the next re-balancing. The preview list includes the next month's index constituents and shows bonds joining or leaving the indices at the next re-balancing, based on information available on such Thursdays.

4.4 Index data

The calculation of the index is based on bid prices. New securities are included in the index at their respective ask prices when they enter the index family. In the event that 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, IHS Markit may consult the specific Index Advisory Committees at the following rebalancing date. Decisions are made publicly available on a timely basis and IHS Markit 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.

On the last trading day of a month, the rebalancing takes place after close of market.

4.5 Index calculus

For specific index formulas please refer to the *Markit iBoxx Bond Index Calculus* document, available in the *Methodology* section of the iBoxx Documentation page on www.markit.com/Documentation/Product/iBoxx.

4.6 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, IHS Markit will estimate the approximate value based on the available data at the time of calculation.

4.6.1 Index and analytics weights

The Markit iBoxx USD Benchmark Index is volume-weighted, with the bond's amount outstanding as the weighting factor. The amount outstanding of a bond is only adjusted at the monthly re-balancing process at the end of each month. However, scheduled redemption payments for amortising 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 summarised below.

Definitions:

- *Amortising 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 funge 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 funge 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 funge 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 a bond (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.

4.7 Index history

The index history starts on 31 December 1998. All 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

IHS Markit publishes an index calculation calendar in the *iBoxx Calendars* section of the iBoxx Documentation page on www.markit.com/Documentation/Product/iBoxx. This calendar provides an overview of the index calculation holidays of the iBoxx bond index families in a given year.

4.10 Data publication and access

The table below summarizes the publication of Markit iBoxx USD Benchmark Index in the *Indices* section of the IHS Markit website www.markit.com/indices for registered users and on the FTP server.

Frequency	File Type	Access
Daily	Underlying file – Bond level	FTP Server
	Indices files – Index level	FTP Server / IHS Markit website / Bloomberg (index levels only)
T - 10	Preview components	FTP Server / IHS Markit website

Frequency	File Type	Access
T - 5	Preview components	FTP Server / IHS Markit website
T - 3	Preview components	FTP Server / IHS Markit website
Monthly	End of month components	FTP Server / IHS Markit website
	XREF files	FTP Server

4.11 Index restatement

Index restatement follows the policy described in the *Markit iBoxx Index Restatement Policy* document, available in the *Methodology* section of the Markit iBoxx Documentation page on www.markit.com/Documentation/Product/iBoxx.

4.12 Index review

Index methodology reviews for the index in this guide are performed on a periodic basis. Any material changes to the methodology governing the indices are published on IHS Markit website.

5 Changes to iBoxx USD index family

21 Dec 2018	<ul style="list-style-type: none"> ● Rating clarification for US Treasuries (Rule 2.3) ● Make changes in Corporate Sectors (Rule 3.6) ● Added seniority levels (Rule 3.7) ● Inclusion criteria for Perpetual Bonds (Rule 2.2)
03 Jan 2018	<ul style="list-style-type: none"> ● Inclusion criteria of senior Fix-to-floater bonds issued by banks (Rule 2.2) ● Updated additional selection criteria for iBoxx USD Domestic Indices (Rule 2.6.2) ● Additional senior bank debt classification based on TLAC regulation (Rule 3.7) ● Clarification on Rebalancing cut-off for bonds within the existing iBoxx USD universe (Rule 4.3)
16 Sep 2016	<ul style="list-style-type: none"> ● Inclusion and exclusion criteria added for COCO and inclusion criteria for "When Issued" US Treasury (Rule 2.2) ● Clarification on amount outstanding of the exchanged bonds (Rule 2.5)
20 Apr 2016	<ul style="list-style-type: none"> ● Removed classification for Insurance wrapped (Rule 3.6) ● Added Singapore, UK and Contractual Covered Bonds (Rule 3.5.1)
22 Mar 2016	<ul style="list-style-type: none"> ● Added classification for Guaranteed and wrapped
15 Mar 2016	<ul style="list-style-type: none"> ● Rebalancing process (Rule 4.3) ● Sub-Sovereign (Rule 3.4)
04 Dec 2015	<ul style="list-style-type: none"> ● Additional clarifications on Bond Type (Rule 2.2)
11 Jul 2015	<ul style="list-style-type: none"> ● Additional clarifications on Bond Type (Rule 2.2)
01 Oct 2014	<ul style="list-style-type: none"> ● Index restatement, complaints section added ● Additional clarifications on Bond eligibility, classification and corporate actions ● Classification change for Real Estate bonds
31 Mar 2013	<ul style="list-style-type: none"> ● Markit iBoxx USD Indices will be based on the pricing methodology described in the document 'Markit iBoxx Pricing Rules'
14 Jan 2013	<ul style="list-style-type: none"> ● Introduction of Markit iBoxx USD Covered Indices
01 Nov 2008	<ul style="list-style-type: none"> ● Clarification of the rules for guaranteed financial debt: Bonds issued by unguaranteed financial institutions with an irrevocable and explicit issue guarantee by the government of the issuer country which covers amount and timeliness of all interest and principal payments until the maturity of the bond are classified as "Guaranteed financial bonds" within "Sub-Sovereigns", "Other Sub-Sovereigns".
01 Oct 2008	<ul style="list-style-type: none"> ● Exclusion of new bonds from entering the index that have been called prior to rebalancing (Rule 2.2)

01 Jul 2008	<ul style="list-style-type: none">● Exclusion of bonds from the index for which technical committee has reasonable cause to believe that the bond is a retail bond or private placement, and IHS Markit is unable to determine otherwise from the issuer or lead manager(s) (Rule 2.1)
01 Jan 2008	<ul style="list-style-type: none">● Change of rating method to average rating method to determine a bond's index rating for Markit iBoxx investment grade indices
01 May 2007	<ul style="list-style-type: none">● Launch of four new iBoxx USD Domestic Subordinated Indices
28 Jun 2005	<ul style="list-style-type: none">● Launch of iBoxx USD Index Family

6 Further information

Glossary of key terms

The Markit iBoxx Glossary document of key terms is available in the *Methodology* section of the Markit iBoxx Documentation page on www.markit.com/Documentation/Product/iBoxx.

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