

**S&P Dow Jones  
Indices**

A Division of **S&P Global**

# **Markit iBoxx USD Liquid Investment Grade Index Guide**

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# 1) Markit iBoxx USD Liquid Investment Grade Index

The Markit iBoxx USD Liquid Investment Grade Index is designed to reflect the performance of US Dollar (USD) denominated investment grade corporate debt. The index rules aim to offer a broad coverage of the USD investment grade liquid bond universe. The indices are an integral part of the global iBoxx index families, which provide the marketplace with accurate and objective indices by which to assess the performance of bond markets and investments. The index is market-value weighted with an issuer cap of 3%.

The Markit iBoxx USD Liquid Investment Grade Index is rebalanced once a month at the month-end and consists of investment grade USD denominated bonds issued by corporate issuers from developed countries and rated by at least one of three rating services: Fitch Ratings, Moody's Investors Service, or S&P Global Ratings.

The bonds in the Markit iBoxx USD Liquid Investment Grade Index must meet all the criteria described below as of the close of business three business days prior to the rebalancing date provided that the relevant bond data can be verified as of such date (bond selection cut-off date). The new index composition becomes effective on the first business day of the next month.

All iBoxx indices are priced based on multiple data inputs. The Markit iBoxx USD Liquid Investment Grade Index uses multi-source prices as described in the document *Markit iBoxx Pricing Rules* publicly available on <https://www.spglobal.com/spdji/en/>.

This document covers the index selection rules and calculation methodology.

## 2) Bond selection rules

The following selection criteria are applied to select the constituents for the Markit iBoxx USD Liquid Investment Grade Index:

- Bond type
- Credit rating
- Expected remaining life
- Amount outstanding
- Lockout period
- Minimum run

### 2.1) Bond type

Only fixed-rate bonds whose cash flow can be determined in advance are eligible for the indices. The indices are comprised solely of bonds. T-Bills and other money market instruments are not eligible. The Markit iBoxx USD Liquid Investment Grade Index include only USD denominated bonds.

In particular, bonds with the following characteristics are included:

- Fixed coupon bonds
- Step-up bonds with coupon schedules known at issuance (or as functions of the issuer's rating)
- Sinking funds and amortizing bonds
- Medium term notes (MTNs)
- Senior fixed-to-float bonds issued by banks with a call option up to 25 months prior to maturity
- Rule 144A offerings with a registration right. Only 144A bonds where the Registration S version of the bond is eligible for the Markit iBoxx USD Benchmark Index are eligible.
- Callable bonds
- Puttable bonds

The following instrument bond types are specifically excluded from the indices:

- Preferred shares
- Optionally and mandatory convertible bonds
- Subordinated bank or insurance debt with mandatory contingent conversion features or with any conversion options before the first call date is ineligible for the index
- Bonds with other equity features attached (e.g., options/warrants)
- Perpetual bonds
- Fixed-to-floater bonds (except Senior fixed-to-float bonds issued by banks with a call option up to 25 months prior to maturity)
- Floating rate notes
- Pay-in kind bonds (during the pay-in-kind period)
- Zero coupon bonds
- Zero step-ups (GAINS)
- Bonds with differences between accrual and coupon payment periods and monthly-paying bonds
- Private placements
- Retail bonds
- 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 analyse the features of such securities in line with the principles set out in 2.1 of this guide. S&P DJI may consult the specific Index Committees. Any decision as to the eligibility or ineligibility of a new bond type will be published and the index rules will be updated accordingly.

## **2.2) Credit rating**

All bonds in the Markit iBoxx USD Liquid Investment Grade Index must have an iBoxx Rating of investment grade. Ratings from the following three credit rating agencies are considered for the calculation of the iBoxx Rating:

- Fitch Ratings
- Moody's Investor Service
- S&P Global Ratings

Investment grade is defined as BBB- or higher from Fitch Ratings and S&P Global Ratings and Baa3 or higher from Moody's Investor Service. Bonds with an RD/SD rating are excluded from the Markit iBoxx USD Liquid Investment Grade Index.

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 available at <https://www.spglobal.com/spdji/en/> under *Methodology*.

## **2.3) Expected remaining life**

All bonds must have at the rebalancing day an expected remaining life:

- Of at least three years
- All new insertions must have an expected remaining life of at least three years and 6 months.

The expected remaining life is calculated from the rebalancing date to the assumed workout date of the bond, by using the day count convention of the bond. The workout date for a bond is determined based on the bond features as follows:

- For plain vanilla bonds, the expected workout date is the final maturity date
- For dated and undated callable financial hybrid capital bonds, the workout date is assumed to be the first call date
- For soft bullets, the expected workout date is determined using the first call date

## **2.4) Amount outstanding**

### **Issue amount outstanding**

The outstanding face value of a bond must be greater than or equal to USD 750 million as of the bond selection cut-off date. Partial buybacks or increases affect the outstanding face value of a prospective bond. S&P DJI considers changes to the outstanding face value of a candidate bond as a result of partial or full buybacks or increases, provided that S&P DJI is aware of such changes as of the bond selection

cut-off date. In the case of RegS securities that are registered as global securities, the remaining amount of the RegS version and the registered version are recombined if the bond is not exchanged in full and if the remaining amount of the RegS version reduces the amount outstanding below the eligibility threshold.

### **Issuer amount outstanding**

The outstanding face value of all bonds denominated in USD from the issuer in the broader Markit iBoxx USD Investment Grade Corporate Index (excluding fixed-to-float and perpetual bonds)<sup>1</sup> must be greater than or equal to USD 2 billion as of the bond selection cut-off date.

<sup>1</sup>Senior fixed-to-float bank bonds present in broader iBoxx USD Investment Grade universe are included.

## **2.5) Lockout period and minimum run**

### **Lockout period**

A bond that drops out of the Markit iBoxx USD Liquid Investment Grade Index at the rebalancing day is excluded from reentering the index for a three-month period. The rule for the lockout period takes precedence over the other rules for the Markit iBoxx USD Liquid Investment Grade Index selection. A locked out bond will not be selected, even if it qualifies for the index.

### **Minimum run**

Any bond that enters the Markit iBoxx USD Liquid Investment Grade Index must remain in the index for a minimum of six months provided it is not downgraded to sub-investment grade, defaulted or fully redeemed in that period.

## 3) Bond classification

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

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

Where the sector classification of a specific entity is not very clear due to the diversified business of the entity, decision will be made at S&P DJI's discretion. S&P DJI will assign the classification according to its evaluation of the business risk presented in the security prospectus and annual reports, if available. S&P DJI will also compare the classification to peers in the potential sectors. Membership lists including classification are published on the FTP server and in the *Indices* section of the webpage for registered users.

### 3.1) Denomination

Bonds must be denominated in USD with clearance and settlement available through Depository Trust and Clearing Corporation (DDTC). The securities need to be either publicly registered in the U.S. with the Securities and Exchange Commission or Rule 144A offerings with registration rights. Eurobonds are excluded.

### 3.2) Issuer

The bond must be corporate credit, i.e., debt instruments backed by corporate issuers that are not secured by specific assets. Debt issued by governments, sovereigns, quasi-sovereigns, and government-backed or guaranteed entities is excluded.

For the purposes of selecting candidates for the index, an *issuer* is defined by the Bloomberg ticker (i.e., all bonds sharing a ticker are attributed to the same issuer).

### 3.3) Issuer country

Bonds from countries classified as developed markets based on the *Markit Global Economic Development Classification* are eligible for the index. The issuer or, in the case of a finance subsidiary, the issuer's guarantor, must be domiciled, incorporated and the country of risk must be in the countries listed as developed markets in *Markit iBoxx Country Classifications*.

The classification is available at: <https://www.spglobal.com/spdji/en/> under *Methodology*.

### Inclusion and exclusion of countries

A new country is added to the index if it is classified as developed market based on the *Markit Global Economic Development Classification*. A country is no longer eligible for the index if it is classified as emerging market based on the *Markit Global Economic Development Classification*. The *Markit Global Economic Development Classification* is updated once per year. The results are published at the end of July. The inclusion/exclusion of a country becomes effective at the end of October.

### 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 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
		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	*

Market Sector	Seniority Level 1	Seniority Level 2	Seniority Level 3
		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 rebalancing 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.

Preview lists of eligible bonds are published on a weekly basis starting on the first Friday that is three business days after the previous month-end rebalance, as well as on the 6th calendar day of the month (or next index publication day if the 6th calendar day falls on a non-business day). Preview lists of eligible bonds are additionally published on T-4, T-3 trading days before the end of the month. Final components are published two business days before the end of the month (T-2).

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

### 4.4) Rebalancing procedure

In a first step the selection criteria set out in chapter 2 are applied to the universe of the broader Markit iBoxx USD Liquid Investment Grade Index.

- Bond ratings and amount outstanding are used as of the bond selection cut-off date
- Maturity dates remain fixed for the life of the bond
- Only bonds with a first settlement date on or before the rebalancing date are included in the selection process

### 4.5) Index weights

Once the eligible bond universe has been defined, the weight for each bond is determined and if necessary capped; applying an issuer cap of 3%. The weights and capping factors are determined on the last business day of each month using the end-of-month market values.

#### 4.6) 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, S&P DJI may consult market participants prior to the next rebalancing date. Decisions are made publicly available on a timely basis and S&P DJI may refer back to previous cases.

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

#### 4.7) Index calculus

The components of the total return are price changes, accrued interest, coupon payments, and reinvestment income on cash flows received during the composition month.

$$TR_t = TR_{t-s} \frac{\sum_{i=1}^n \left( P_{i,t} + A_{i,t} + XD_{i,t-s} \cdot (CP_{i,t} + G_{i,t}) \right) \cdot N_{i,t-s} + CASH_{t-1} \cdot \left( 1 + SOFR_{t-2USBD} \cdot days_{ACT/360}(t-1, t) \right)}{\sum_{i=1}^n \left( P_{i,t-s} + A_{i,t-s} + XD_{i,t-s} \cdot CP_{i,t-s} \right) \cdot N_{i,t-s}}$$

where,

$A_{i,t}$	is the accrued interest of bond i on calculation day t
$A_{i,t-s}$	is the accrued interest of bond i on rebalancing day t-s
$CASH_{t-1}$	is the cash on the previous business day
$CP_{i,t}$	is the value of the next coupon payment of bond i during an ex-dividend period. Outside the ex-dividend period, this value is 0
$G_{i,t}$	is the value of any coupon payment received from bond i at time t. If there is no payment the value is 0
$N_{i,t-s}$	is the amount outstanding of bond i on the previous rebalancing day t-s
$days_{ACT/360}(t-1, t)$	is the number of days between the previous calculation date (t-1) and the current calculation date t
$P_{i,t}$	is the closing price of bond i on the last business day on or before the previous rebalancing day
$P_{i,t-s}$	is the closing price of bond i on the last business day on or before the previous rebalancing day
$SOFR_{t-2USBD}$	is the SOFR rate falling two U.S. Government Securities Business Days prior to the calculation day i
$TR_t$	is the total return index level on day t
$TR_{t-s}$	is the closing total return index level on the previous rebalancing day
$XD_{i,t-s}$	is ex dividend indicator flag. The value is 0, if the bond enters the index at the ex-dividend period. The value is 1, if (a) coupon payments are not ex-dividend, (b) has not entered the index

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

#### 4.8) 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.

##### 4.8.1) 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.

##### 4.8.2) 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).

##### 4.8.3) 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.

#### 4.8.4) Tender offers and calls

Any bond subject to a firm call or tender offer, with the exception of exchange offers, in the month immediately following the rebalancing date will be excluded from the index, provided that S&P DJI is aware of such tender offer or call as of the Bond selection cut-off date.

#### 4.8.5) Maturity extension

##### 4.8.5.1) Maturity extension for dated fixed-to-fixed bonds with a reset date

Maturity	Coupon/Call structure	Workout Date at issuance	Updated Workout date if not called
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

##### 4.8.5.2) 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

#### 4.9) Index history

The full index history including index composition starts on 31 December 2006. The index level history that was calculated by a third-party prior to that date goes back to 31 December 1998 and started with a base value of 100. The only field available prior to 31 December 2006 is the 'Total Return Index Level'.

#### 4.10) Settlement conventions

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

#### 4.11) 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 in a given year.

#### 4.12) Publication of the index

The Markit iBoxx USD Liquid Investment Grade Index is calculated as end-of-day index and distributed once daily after close of US markets.

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

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

#### 4.13) Data publication and access

The table below summarizes the publication of Markit iBoxx USD Liquid Investment Grade Index at <https://www.spglobal.com/spdji/en/> for registered users and on the FTP server.

Table 3: Data publication 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
Daily from the 6th calendar day of the month (or next index publication day if the 6th calendar day falls on a non-business day)	Forwards	FTP Server
Weekly (Friday) <sup>1</sup>	Preview components	FTP Server / website
T-4, T-3 & T-2	Preview components	FTP Server / website
Monthly	End of month components	FTP Server / website
	XREF files	FTP Server

<sup>1</sup>Previews will be published starting from the first Friday that is three business days after the previous month-end rebalance.

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

Table 4: Index identifiers

Index Name	Return Type	ISIN	Ticker
iBoxx USD Liquid Investment Grade	CPI	GB00B4KT9Q30	IBOXILPR
iBoxx USD Liquid Investment Grade	TRI	GB00B4K4X773	IBOXIG

#### 4.14) 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, 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](#).

## 6) Changes to the Markit iBoxx USD Liquid Investment Grade Index

30-Jun-2023	<p><b>Annual Index Review 2022</b></p> <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> </ul>
01-Mar-2023	Inclusion of senior Fixed-to-float bonds issued by banks into Issuer Amount Outstanding
30-Jun-2022	Monthly forward start date updated from 10th calendar day to 6th calendar day
31-Mar-2022	<p><b>Annual Index Review 2021</b></p> <ul style="list-style-type: none"> <li>• Introduction of new market sector classification "Education" with market sub-sector classification "Academic &amp; Educational Services"</li> </ul>
31-Dec-2021	Cash re-investment reference rate changed to SOFR
01-Sep-2021	Monthly forward start date updated from 12th calendar day to 10th calendar day
01-Mar-2021	Governance and Regulatory Compliance section added
28-Feb-2021	<p><b>Annual Index Review 2020</b></p> <ul style="list-style-type: none"> <li>• Updated Insurance classification</li> </ul>
31-Jul-2020	<p><b>Annual Index Review 2019</b></p> <ul style="list-style-type: none"> <li>• Introduction of updated corporate classification schema</li> <li>• Implementation of updated Bank Tier Classification</li> <li>• Updates as part of the changes in definition and treatment of hybrid bonds</li> </ul>
03-Jan-2018	Inclusion criteria of senior Fixed-to-float bonds issued by banks (bail-in)
15-Mar-2016	Rebalancing process added. (Rebalancing process)
27-Aug-2015	Clarification of Issue amount outstanding for exchanged bonds. (Issue Amount outstanding)
01-Oct-2014	Index restatement, complaints sections added, Additional clarifications on bond eligibility, classification and corporate actions
31-Mar-2013	Markit iBoxx USD Liquid Investment Grade Indices will be based on additional pricing sources as described in the document ' <i>Markit iBoxx Pricing Rules</i> '
31-Aug-2012	Inclusion of 144A Bonds with Registration Rights (Bond Type) and exclusion of bonds where the issuer is not incorporated in the list of developed countries (Issuer country)
30-Apr-2012	Extension of the Markit iBoxx USD Liquid Investment Grade Index (Appendix II)

<b>01-Nov-2010</b>	ISIN_Tri updated from GB00B1G2GC06 to GB00B4K4X773
<b>30-Sep-2009</b>	Extension of the Markit iBoxx USD Liquid Investment Grade Index (Appendix I)
<b>31-Oct-2008</b>	Publication of the new market profile for Markit iBoxx USD Liquid Investment Grade Index
<b>29-Feb-2008</b>	Incumbency premium for current index members raised from 6.0 to 8.5
<b>29-Feb-2008</b>	Addition of new rule concerning exchange of bonds from same issuer
<b>01-Jan-2008</b>	Launch of average rating to determine a bond's index rating
<b>01-Nov-2006</b>	Launch of Markit iBoxx USD Liquid Investment Grade Index

# 7) Appendix

## 7.1) Appendix I: 2009 Changes between 100 Bond IG Index and the Unrestricted Index

On September 30<sup>th</sup> 2009, S&P DJI made significant changes to the original set of index rules to broaden the set of instruments qualifying for the index. Below is a summary of the rule changes between the Markit iBoxx USD Liquid Investment Grade Index before 30 September 2009 and after 30 September 2009.

Table 5: Issuer and Issue amount outstanding

Before 30 September 2009	After 30 September 2009
The outstanding face value of a bond must be greater than or equal to <b>USD 500 million</b> as of the Bond Selection Cut-off Date.	The issuer needs to have at least USD 3 billion outstanding face value of bonds as of the Bond Cut-off Date in the broader Markit iBoxx USD IG Corporate index excluding fixed-to-floater, callable, puttable and perpetual bonds The outstanding face value of a bond must be greater than or equal to <b>USD 750 million</b> as of the Bond Cut-off Date.

Table 6: Weighting and capping

Before 30 September 2009	After 30 September 2009
The Markit iBoxx USD Liquid IG Index attributes the same price-weight to each bond (assuming equal quantity of each bond).	The Markit iBoxx USD Liquid IG Index is market-value weighted. An issuer cap is calculated on the last business day of each month using the end-of-month closing prices for each bond. The capping factor for each issuer is <b>3%</b> .

Table 7: Rebalancing timeline

Before 30 September 2009	After 30 September 2009
The Bond Selection Cut-off Date will be <b>three</b> business day before the re-balancing date, which is two business days prior to the last business day of the month.	The Bond Selection Cut-off Date will be <b>four</b> business day before the re-balancing date, which is three business days prior to the last business day of the month.
Bond ratings and amounts outstanding are used as of <b>three</b> business days before the rebalancing date, which is two business days prior to the last business day of the month.	Bond ratings and amounts outstanding are used as of <b>four</b> business days before the rebalancing date, which is three business days prior to the last business day of the month.
Only bonds with a first settlement date on or <b>before the re-balancing date</b> are included in the selection process	Only bonds with a first settlement date on or <b>before four business days</b> before the re-balancing date are included in the selection process.

Table 8: Age

Before 30 September 2009	After 30 September 2009
Bonds must be less than 5 years old as of rebalancing date.	The age restriction is not applied.

Table 9: Bond type

Before 30 September 2009	After 30 September 2009
Yankee bonds are not eligible.	Yankee bonds are eligible for the index.

## 7.2) Appendix II: Additional Changes to the Index Effective from April 30th, 2012

On April 30<sup>th</sup> 2012 S&P DJI started to apply the rules described in chapter 2 above. Below is a summary of the main rule changes of the Markit iBoxx USD Liquid Investment Grade Index before April 30<sup>th</sup> 2012 and after April 30<sup>th</sup> 2012.

Table 10: Bond type

Before April 30th, 2012	After April 30th, 2012
Fixed coupon bonds, step-up bonds with coupon schedules known at issuance (or as functions of the issuer's rating), medium-term notes (MTNs), sinking funds and make-whole callables are eligible are candidates for inclusion. The following instruments are excluded from the index: preferred shares, convertibles, bonds with other equity features attached (e.g., options/warrants), perpetual bonds, floating rate notes, putables and callables are not eligible.	Fixed coupon bonds, step-up bonds with coupon schedules known at issuance (or as functions of the issuer's rating), bonds with sinking funds, medium term note (MTNs), <b>callable</b> and <b>putable</b> bonds are candidates for inclusion. The following instruments are excluded from the index: preferred shares, convertible bonds, bonds with other equity features attached (e.g., options/warrants), perpetual bonds, fixed-to-floater, floating rate notes, pay-in kind bonds (during the pay-in-kind period), zero coupon bonds, zero step-ups (GAINS).

Table 11: First settlement date

Before April 30th, 2012	After April 30th, 2012
New issues must have a first settlement date on or before the <b>Bond selection cut-off date</b> to be included in the index for the next period.	New issues must have a first settlement date on or before the <b>Rebalancing Date</b> to be included in the index for the next period.

Table 12: Inclusion and exclusion of countries

Before April 30th, 2012	After April 30th, 2012
NA	<p>A new country is added to the index if it is classified as developed market based on the <i>Markit Global Economic Development Classification</i>.</p> <p>A country is no longer eligible for the index if it is classified as emerging market based on the <i>Markit Global Economic Development Classification</i>. The <i>Markit Global Economic Development Classification</i> is updated once per year.</p> <p>The results are published at the end of July.</p> <p>The inclusion/exclusion of a country becomes effective at the end of October.</p>

Table 13: Issuer country

Before April 30th, 2012	After April 30th, 2012
<p>The issuer or, in the case of a finance subsidiary, the issuer's guarantor, must be domiciled in the US, Bermuda, Cayman Islands, Canada, Japan or Western Europe.</p>	<p>Bonds from countries classified as <b>developed markets</b> based on the <i>Markit Global Economic Development Classification</i> are eligible for the index.</p> <p>As of March 2012 the issuer or, in the case of a finance subsidiary, the issuer's guarantor, must be domiciled and the <b>country of risk</b> must be in Andorra, <b>Australia</b>, Austria, Belgium, Bermuda, Canada, Cayman Islands, Cyprus, Denmark, Faeroe Islands, Finland, France, Germany, Gibraltar, Greece, <b>Hong Kong</b>, Iceland, Ireland, Italy, Japan, Liechtenstein, Luxembourg, Malta, Monaco, Netherlands, <b>New Zealand</b>, Norway, Portugal, San Marino, <b>Singapore</b>, Spain, Sweden, Switzerland, U.S., United Kingdom.</p>

Table 14: Issuer amount outstanding

Before April 30th, 2012	After April 30th, 2012
<p>The outstanding face value of all USD denominated bonds in the broader Markit iBoxx USD IG Corporate Index (including yankees and Eurobonds and <b>excluding fixed-to-floater, callable, puttable and perpetual bonds</b>) from the issuer must be greater than or equal to <b>USD 3 billion</b> as of the Bond Selection Cut-off Date.</p>	<p>The outstanding face value of all bonds denominated in USD from the issuer in the broader Markit iBoxx USD Investment Grade Corporate Index (<b>excluding fixed-to-floater and perpetual bonds</b>) must be greater than or equal to <b>USD 2 billion</b> as of the bond selection cut-off date.</p>

## 8) Further information

### Client support

For client support please contact:

<b>E-mail:</b>	<a href="mailto:indices@ihsmarkit.com">indices@ihsmarkit.com</a>		
<b>Phone:</b>	<b>Asia Pacific</b>	Japan: Singapore:	+81 3 6402 0127 +65 6922 4210
	<b>Europe</b>	General: UK:	+800 6275 4800 +44 20 7260 2111
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# A) ESG Disclosures

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY [1]		
1	Name of the benchmark administrator.	IHS Markit Benchmark Administration Limited (IMBA)
2	Underlying asset class of the ESG benchmark. [2]	N/A
3	Name of the S&P Dow Jones Indices benchmark or family of benchmarks.	<a href="#">iBoxx Benchmark Statement</a>
4	Do any of the indices maintained by this methodology take into account ESG factors?	No
Appendix latest update:		May 2023
Appendix first publication:		May 2023

[1] The information contained in this Appendix is intended to meet the requirements of the European Union Commission Delegated Regulation (EU) 2020/1817 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the minimum content of the explanation of how environmental, social and governance factors are reflected in the benchmark methodology and the retained EU law in the UK (The Benchmarks (amendment and Transitional Provision) (EU Exit) Regulations 2019).

[2] The 'underlying assets' are defined in European Union Commission Delegated Regulation (EU) 2020/1816 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published.

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