

**S&P Dow Jones
Indices**

A Division of **S&P Global**

Markit iBoxx USD Liquid Investment Grade Maturity Index Guide

May 2023

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1) Markit iBoxx USD Liquid Investment Grade Maturity Indices

This index guide collectively governs the index methodology for a series of US Dollar (USD) denominated liquid indices that aim to reflect the performance of USD denominated investment grade corporate debt . The following three indices are covered:

- The Markit iBoxx USD Liquid Investment Grade 0-5 Index (remaining bond life below five years)
- The Markit iBoxx USD Liquid Investment Grade Intermediate Index (remaining bond life between five and ten years)
- The Markit iBoxx USD Liquid Investment Grade Long Index (remaining bond life above ten years)

The indices are an integral part of the global iBoxx index families, which provide the marketplace with accurate and objective benchmarks by which to assess the performance of bond markets and investments. The indices are market-value-weighted with an issuer cap of 3%.

The Markit iBoxx USD Liquid Investment Grade Maturity Indices are rebalanced once a month at the month-end (the 'rebalancing date') 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 Maturity Indices 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 Index uses multi-source prices as described in the document *Markit iBoxx Pricing Rules* publicly available under Methodology on www.ihsmarkit.com.

This document covers the index rules and calculation methodology.

2) Bonds selection rules

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

- Bond type
- Credit rating
- Time to maturity
- Amount outstanding
- Classification
- 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 Maturity Indices include only USD denominated bonds.

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)
- 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 bond types are specially excluded:

- 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
- 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

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.ihsmarkit.com under *News & Information* 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 this section of the 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.

2.2) Credit rating

All bonds in the Markit iBoxx USD Liquid Investment Grade Maturity Indices 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.ihsmarkit.com under *Methodology*.

2.3) Time to maturity

2.3.1) Markit iBoxx USD Liquid Investment Grade 0-5 Index

For the Markit iBoxx USD Liquid Investment Grade 0-5 Index, all bonds must have at the rebalancing day an expected remaining life below five years. All new insertions must have a time to maturity of at least 6 months. Bonds are kept in the index until maturity. All bonds must have a time to maturity of at least one year at issuance.

2.3.2) Markit iBoxx USD Liquid Investment Grade Intermediate Index

For the Markit iBoxx USD Liquid Investment Grade Intermediate Index, all bonds must have at the rebalancing day an expected remaining life between five and ten years. All new insertions must have a time to maturity of at least 5 years and 6 months.

2.3.3) Markit iBoxx USD Liquid Investment Grade Long Index

For the Markit iBoxx USD Liquid Investment Grade Long Index, all bonds must have at the rebalancing day an expected remaining life above ten years. All new insertions must have a time to maturity of at least 10 years and 6 months.

2.3.4) Expected remaining life

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 non-financial hybrid capital bonds with an interest rate reset, the workout date is assumed to be the first reset date
- For soft bullets, the expected workout date is determined using the first call date

2.4) Amount outstanding

Issue amount outstanding

All bonds must have a specific minimum amount outstanding in order to be eligible for the indices. The amount outstanding of a bond must be greater than or equal to USD 500 million as of the bond selection cut-off date. 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.

Issuer amount outstanding

For the Markit iBoxx USD Liquid Investment Grade Intermediate/Long Index, 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-floater, perpetual bonds and bonds with time to maturity below one year) must be greater than or equal to USD 1 billion as of the bond selection cut-off date.

For the Markit iBoxx USD Liquid Investment Grade 0-5 Index, 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-floater and perpetual bonds) must be greater than or equal to USD 1 billion as of the bond selection cut-off date.

2.5) 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: www.ihsmarkit.com under *Methodology*.

Inclusion and exclusion of countries

A new country is added to the indices if it is classified as developed market based on the *Markit Global Economic Development Classification*. A country is no longer eligible for the indices 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.

2.6) Lockout period and minimum run

Lockout period

A bond that drops out of the Markit iBoxx USD Liquid Investment Grade Maturity Indices at the rebalancing day is excluded from re-entering 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 Maturity Indices 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 Maturity Indices 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 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.ihsmarkit.com for registered users.

3.1) Denomination

Bonds must be denominated in USD with clearance and settlement available through Depository Trust and Clearing Corporation (DTCC). 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) 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		
	Real Estate	Real Estate	Nonequity Investment Instruments		
			Guaranteed & Wrapped	*	
	Real Estate	Real Estate	Real Estate Investment & Services		
Real Estate Investment Trusts					
Non-Financials	Oil & Gas	Oil & Gas	Oil & Gas Producers		
			Oil Equipment / Services & Distribution		
			Alternative Energy		
	Basic Materials	Chemicals	Chemicals		
		Basic Resources	Industrial Metals		
			Mining		
	Forestry & Paper	Forestry & Paper	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

3.4) 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	

Market Sector	Seniority Level 1	Seniority Level 2	Seniority Level 3
		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 *Markit iBoxx Pricing Rules* document, available in the *Methodology* section of the iBoxx Documentation page on www.ihsmarkit.com.

4.3) Rebalancing process

The Markit iBoxx USD Liquid Investment Grade Maturity Indices are rebalanced monthly on the last business day of the month after the close of business. Changes to outstanding amounts are only taken into account if they are publicly known three business days before the end of the month. Changes in ratings are only taken into account if they are publicly known two business days before the end of the month. New bonds issued are taken into account if they are publicly known to settle until the last calendar day of the month, inclusive, and if their rating has become known at least three trading days before the end of the month.

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

Two business days before the end of each month, the rating information for the constituents is updated and the list is adjusted for all rating changes which are known to have taken place two trading days before the end of the month. Bonds which are known to have been upgraded to investment grade two trading days before the end of the month are not included in the membership, but bonds which are known to have been downgraded to sub-investment grade two trading days before the end of the month do get excluded from the membership. However, if any bonds which are part of the broader USD universe become eligible two business days prior to rebalancing because of rating or amount changes, they will be included in the Index.

On the last business day of each month, IHS Markit publishes the final membership with closing prices for the bonds, and various bonds analytics based on the index prices of the bonds.

4.3.1) Rebalancing procedure

In a first step the selection criteria set out in *Bond Selection Rules* are applied to the universe of the broader Markit iBoxx USD Corporate 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

4.4) 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. 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 market participants prior to the next rebalancing date. Decisions are made publicly available on a timely basis and IHS Markit may refer back to previous cases.

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

The indices are transaction cost adjusted. For specific cost factor calculation formulae please refer to the Markit iBoxx Bond Index Calculus document, available in the Methodology section of the Markit iBoxx Documentation page on www.ihsmarkit.com.

4.5) 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.

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

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 during an ex-dividend period, or (c) entered the index during a previous ex-dividend period

For specific index formulae please refer to *Markit iBoxx Bond Calculus* document, available on www.ihsmarkit.com 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, IHS Markit will estimate the approximate value based on the available data at the time of calculation.

4.6.1) Index analytics and weightings

The Markit iBoxx USD Liquid Investment Grade Maturity Indices are market-value-weighted indices, with a bond's market value as the weighting factor. Once the eligible bond universe has been defined, the weight for each bond is determined and an issuer cap of 3% is applied. The weights and capping factors are determined on the last business day of each month using the end-of-month market values. The amount outstanding of a bond is only adjusted within the monthly rebalancing process at the end of each month. However, bonds that are fully redeemed intra-month are taken into account immediately. Fully redeemed bonds are bonds that are fully called or have been completely repurchased. All calculations are based on the adjusted amount outstanding that reflects the outstanding bond notional at the last rebalancing. The bond prices relate to the nominal value of 100.

4.6.2) Full redemptions: exercised calls, puts and buybacks

If a bond is fully redeemed intra-month, the bond effectively ceases to exist. In all calculations, the redeemed bond is treated as cash based on the last price, the call price or repurchase price, as applicable. The redemption factor, redemption and the redemption price are used to treat these events in the index and analytics calculation. In addition, the clean price of the bond is set to the redemption price, and the interest accrued until the redemption date is treated as an irregular coupon payment.

4.6.3) Bonds trading flat of accrued

If a bond is identified as trading flat of accrued, the accrued interest of the bond is set to 0 in the total return index calculation and is excluded from the calculation of all bond and index analytical values.

Bonds will be considered trading flat of accrued in any of the following situations:

- a bond has been assigned a default rating and/or
- issuer has announced a failure to pay a coupon and/or
- issuer has announced an intention not to make a payment on an upcoming coupon (grace period).

4.6.4) Multi-coupon bonds

Some bonds have pre-defined coupon changes that lead to a change in the annual coupon over the life of the bond. In all instances, the coupon change must be a fixed amount on top of a fixed coupon, i.e. floating coupon bonds are not eligible for the indices. The two main categories of bonds are step-up bonds and event-driven bonds.

- **Step-up bonds:** These are bonds with a pre-defined coupon schedule that cannot change during the life of the bond. The coupon schedule is used in all bond calculations.
- **Event-driven bonds:** These are bonds whose coupon may change upon occurrence (or non-occurrence) of pre-specified events, such as rating changes, e.g. rating-driven bonds, failure to register (register-driven bonds), or failure to complete a merger (merger-driven bonds). In the calculation of the indices and the analytics, the coupon schedule as of the calculation date is used. That is to say, any events occurring after the calculation date are ignored in the determination of the applicable coupon schedule. *Example of an event-driven bond:* A bond's rating changes on 31 December 2003 from A- to BBB+ and the coupon steps up from 6% to 6.25% from 1 March 2004 onward. The coupon dates are 1 October and 1 April each year. The correct coupon schedule for the bond and index calculations is date dependent. The index calculation on 20 December 2003 uses the 6% coupon for the whole life of the bond, while the calculation on 31 January 2004 uses a 6% coupon for the current coupon period to 29 February 2004, and a 6.25% coupon for all later interest payments. The index calculation on 20 March uses a 6% coupon until 29 February, a 6.25% coupon for the remainder of the current coupon period and a 6.25% coupon for all future coupon payments. The index calculation after 1 April uses a 6.25% coupon.

4.7) Index history

The Index history starts on 30 April 2010. 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

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

4.10) Publication of the index

The Markit iBoxx USD Liquid Investment Grade Maturity Indices are calculated as end-of-day indices 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 www.ihsmarkit.com under *iBoxx 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 www.ihsmarkit.com for registered users.

4.11) Data publication and access

The table below summarizes the publication of the Markit iBoxx USD Liquid Investment Grade Maturity Indices in the *Indices* section of the IHS Markit website www.ihsmarkit.com for registered users and on the FTP server.

Table 3: Publication types and access

Frequency	File Type	Access
Daily	Underlying files – Bond level	IHS Markit FTP Server
	Indices files – Index level	IHS Markit FTP Server / IHS Markit website/ Bloomberg for index levels only
Daily from the 6th calendar day of the month (or the next index publication day if the 6th calendar day falls on a non-business day)	Forward Files	IHS Markit FTP Server
Monthly	End of Month Components	IHS Markit FTP Server / IHS Markit website
	XREF files	IHS Markit FTP Server

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

Table 4: Identifier overview

Index Name	iBoxx USD Liquid Investment Grade 0-5		iBoxx USD Liquid Investment Grade Intermediate		iBoxx USD Liquid Investment Grade Long	
	TRI	CPI	TRI	CPI	TRI	CPI
ISIN	GB00BC5ZDZ94	GB00BC5ZF534	GB00BYZ8K626	GB00BYZ8K733	GB00BYZ8K840	GB00BYZ8K956
Sedol	BC5ZDZ9	BC5ZF53	BYZ8K62	BYZ8K73	BYZ8K84	BYZ8K95
Ticker	IBXXSIG1	IBXXSIG2	IBXXLIMP	IBXXLIMT	IBXXLILP	IBXXLILT
RIC	.IBXXSIG1	.IBXXSIG2	.IBXXLIMP	.IBXXLIMT	.IBXXLILP	.IBXXLILT

4.12) Index review

The rules for the Index are reviewed on a periodic basis during the public review and consultation process to ensure that the index provides a balanced representation of the USD denominated debt market. Decisions made following feedback from market participants, the index review and External Advisory Committees (EAC) will be published on www.ihsmarkit.com shortly after the EACs have been held. The publication will contain a detailed overview and timelines for implementation of any rules changes.

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 Index

30-Jun-2022	Update of monthly forward start date from 10th calendar day to 6th calendar day
31-Mar-2022	Implementation of Annual Index Review 2021 • Introduction of new market sector classification "Education" with market sub-sector classification "Academic & Educational Services"
31-Dec-2021	Cash re-investment reference rate changed to SOFR
01-Sep-2021	Update of monthly forward start date from 12th calendar day to 10th calendar day
01-Mar-2021	Governance and Regulatory Compliance section added
28-Feb-2021	Implementation of Annual Index Review 2020 • Updated Insurance classification
31-Jul-2020	Implementation of Annual Index Review 2019 <ul style="list-style-type: none"> • Introduction of updated corporate classification schema • Implementation of updated Bank Tier Classification • Updates as part of the changes in definition and treatment of hybrid bonds
03-Jan-2018	Inclusion criteria of senior Fix-to-floater bonds issued by banks (bail-in)
15 Jun 2017	Launch of the Markit iBoxx Liquid Investment Grade Intermediate/Long Index
21 Sep 2016	Markit iBoxx Liquid Investment Grade 0-5 Index: Clarification on amount outstanding of the exchanged bonds (Rule 3.5.1)
22 Mar 2016	Markit iBoxx Liquid Investment Grade 0-5 Index: Added classification for Guaranteed & Wrapped
15 Mar 2016	Markit iBoxx Liquid Investment Grade 0-5 Index: Rebalancing process
01 Oct 2014	Markit iBoxx Liquid Investment Grade 0-5 Index: Index restatement, complaints sections added, additional clarifications on bond eligibility, classification and corporate actions
31 Aug 2013	Launch of the Markit iBoxx Liquid Investment Grade 0-5 Index

7) Further information

Glossary of key terms

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

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

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

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