

**S&P Dow Jones
Indices**

A Division of **S&P Global**

Markit iBoxx EUR & USD Corporate Liquid Sector Indices

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1 Markit iBoxx EUR & USD Corporate Liquid Sector Indices

This document contains the specifications for the EUR and USD Corporate Liquid maturity indices. The indices are based on the Markit iBoxx USD Corporate and Markit iBoxx EUR Corporate indices and are only comprised of 1-3, 3-7 and 7-10 year maturity bands, each with 50 constituents.

The EUR and USD Corporate Liquid indices follow the calculation calendar of the existing Markit iBoxx EUR and USD Liquid indices respectively.

The index is rebalanced on a quarterly basis and monthly substitution occurs at month-end.

2 Overview of the index universes

The index universe is based on data as of the 31 March 2009 and is comprised of constituents in the Markit iBoxx EUR Corporate index and the Markit iBoxx USD Corporate index.

3 Index structure and selection criteria

3.1 Index structure

The Markit iBoxx EUR & USD Corporate Liquid Sector Indices are comprised of 1-3, 3-7 and 7-10 year maturity bands each with 50 constituents. No overall index is published. In order to reflect the market profile of the index universe, bonds are selected using a market profile based on financials/non-financials industry classification.

The highest ranking bonds within each maturity band are selected by applying the ranking criteria described in section 3.4

Index calculations and relevant analytics are calculated according to the standard analytics specified in the Markit iBoxx EUR Liquid Index Guide and the Markit iBoxx USD Liquid IG Index Guide available on the iBoxx Documentation page at www.ihsmarkit.com.

3.2 Selection criteria

The following selection criteria is designed to determine index constituents:

- Bond type
- Time to maturity
- Amount outstanding
- Age

3.2.1 Bond type

Only fixed rate bonds whose cash flow can be determined in advance are eligible for the indices. The indices include only EUR and USD denominated bonds.

In addition to bonds already excluded from the broad indices, the following bond types are specifically excluded from the index:

- Callable bonds with a fixed call date (except for the bonds that are being called 3 months or less prior to maturity)
- 144As (USD only)
- Regulation S bonds (USD only)
- Subordinated bonds
- Zero coupon bonds

3.2.2 Credit rating

All bonds in the Markit iBoxx EUR & USD Corporate Liquid Sector 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. Bonds with an RD/SD rating are excluded from the Markit iBoxx EUR & USD Corporate Liquid Sector Indices.

If more than one of the above agencies rates a bond, then the iBoxx rating is the average of the provided ratings. The index consolidates ratings to the nearest rating grade and does not use rating notches. 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*.

3.2.3 Time to maturity

Bonds with less than 18 months to maturity are excluded from the index. Time to maturity is measured from the rebalancing date to the maturity date. The time to maturity for substitutes is measured from the substitution date to the maturity date of the bond.

3.2.4 Amount outstanding

The minimum size required is EUR 750 million for EUR corporates and USD 750 million for USD corporates.

3.2.5 Age

Bonds over 4 years of age are not eligible for the index. The age is measured from the bond's first settlement date to rebalancing date. The age of substitutes is measured from the first settlement date to the substitution date of the bond.

3.3 Bond classification

All bonds are classified based on the principal activities of the issuer and the main sources of the cash flows used to pay coupons and redemptions. In addition, a bond's specific collateral type or legal

provisions are evaluated. Hence, it is possible that bonds issued from different subsidiaries of the same issuer carry different classifications.

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

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

3.4 Bond selection

Bonds are selected using a market profile based on financials and non-financials industry classification. The market profile consists of bonds in the underlying corporates indices excluding subordinated bonds. This is to ensure that the liquid indices created reflect the underlying indices.

The number of bonds selected from a sector is determined by the sectors market share. A sector's market share is defined as the percentage share of the total market capitalization of all bonds (excluding subordinated bonds) from a sector as a proportion of the total market capitalization of all bonds (excluding subordinated bonds) in the underlying index.

The market share of a sector is calculated as follows:

$$MS_r = \frac{\sum_{i \in r}^n (P_{i,t-s} + A_{i,t-s} + CP_{i,t-s})O_{i,t-s}}{\sum_{i \in F^r + N^r}^n (P_{i,t-s} + A_{i,t-s} + CP_{i,t-s})O_{i,t-s}}$$

where:

MS_r is the market share of sector

$A_{i,t-s}$ is the accrued interest of bond i on the last calendar day of the previous month

$CP_{i,t-s}$ is the value adjustment of next coupon payment of bond i because of its ex-dividend period. If none, the value is equal to 0

$O_{i,t-s}$ is the adjusted weight of bond i in the index

$P_{i,t-s}$ is the closing price of bond i on the last trading day of the previous month

n is the number of bonds comprised in the index

r is equal to F^r (Financials ex-subordinated bonds) and N^r (Non-Financials ex-subordinated bonds)

The market share is determined after the underlying index rebalancing, one month prior to the liquid index rebalancing. For example, for the August 31 rebalancing the market share is determined on July 31. The data used is as follows:

- Closing prices from the underlying indices at the rebalancing date
- New constituents list

The market share is used to determine the number of bonds from each of the two sectors. The calculated market share is rounded to the nearest full 2 %. The result is multiplied by 50. The resulting figure is the number of bonds to be selected from the financials and the non-financials sector.

Within each sector, the necessary number of bonds are selected based on following criteria:

- Eligible bonds from previous rebalancing will remain in the index

Remaining bonds for the maturity bucket are selected according to their rank, beginning with the highest ranking bond. Ranking is based on the criteria below.

- Nominal outstanding (decreasing order)
- Age (increasing order)
- Time to maturity (decreasing order)
- Coupon (increasing order)
- ISIN (increasing order)

If fewer eligible bonds than required are available for one of the sectors, then all eligible bonds from that sector will enter the index. The number of bonds from the other sector will remain unchanged. As a result, the number of issuers from each sector is split according to the market share in the benchmark index.

The selection process is subject to weights and restrictions mentioned in section below.

4 Weights and restrictions

The weighting rules below are applied to limit the dominance of a particular issuer and ensure sector weights of the index do not significantly diverge from that of the underlying indices.

4.1 Number of bonds per issuer

The maximum number of bonds per issuer in an index is normally restricted to 1. However, a maximum of 2 bonds per issuer is permitted in situations where the target index size of 50 would not be achieved if the restriction of 1 bond per issuer is applied. The number of bonds per issuer restriction is applied during quarterly rebalancing and monthly substitution.

4.2 Weight of issuer

The issuer weight in each index is capped at 5% of the index. The weight is based on the base market value (the market capitalization) on the rebalancing date. Issuer level capping is applied at the same time as the quarterly rebalancing. Issuer capping is applied after sector rebalancing (please see section 4.3).

The capping follows the rules of the iBoxx GBP Liquid Corporates index.

4.3 Sector weights

The differences between the financials/non-financials sector weights of the index and that of the underlying market profile are capped at $\pm 5\%$. A maximum of 2 bonds are shifted between the 2 sectors in the index in order to reduce the divergence between the index and underlying liquidity indices. Please note, that index weights used in sector rebalancing are based on base market values. The shifting of bonds is also subject to the max number of bonds per issuer rule. Sector rebalancing is carried out on a quarterly basis at the same time as the quarterly rebalancing.

In the example below the initial number of financials and non-financials bonds were determined using market profile and ranking criteria in section 3. The difference between the weights of the financials and non-financials in the index and that of the underlying index is -5.96% and 5.96% respectively. A bond from the non-financials sector bond was removed from the index and replaced with a bond from the financials sector to reduce the difference to within the tolerance range.

Table 1: Index composition pre-sector rebalancing

1	iBoxx € Liquid Corporates 7-10 MID		Underlying Index	
	Const.	Weight (%)	Weight (%)	Diff. Weight (%)
Financials	19	40.36%	46.31%	-5.96%
Non-Financials	31	59.64%	53.69%	5.96%

The resulting index has 20 bonds from the financials sector and 30 from the non-financials sector. The difference in weights between the Euro Liquid Corporate and the underlying index is reduced to -4.96% and 4.96% for the financials and non-financials respectively.

Table 2: Index composition post sector rebalancing

2	iBoxx € Liquid Corporates 7-10 MID		Underlying Index	
	Const.	Weight (%)	Weight (%)	Diff. Weight (%)
Financials	20	42.07%	46.31%	-4.25%
Non-Financials	30	57.93%	53.69%	4.25%

The weights of issuers are checked post sector rebalancing and issuer level capping applied, where necessary

5 Rebalancing and substitution

5.1 Rebalancing

The indices rebalance every quarter at the end of February, May, August, and November. The indices are rebalanced on the last calendar day of the month after the last index calculation. Rebalancing also takes place if the last day of the month falls on a non-business day.

After completion of the eligible underlying universe, the ranking criteria as described under the *Bond Selection* section are applied to the universe to determine the issuer hierarchy and eligible securities. Ranking criteria applies to the bond substitution between rebalancings.

Three business days before the end of each month, a preliminary preview list is published for USD indices, and the final membership for all indices is published on the rebalancing day to reflect final changes in the ranking based on the underlying indices.

5.1.1 Exclusion of a currency

Bonds denominated in a developed market currency are excluded from the index, if the number of eligible bonds is less than 10 or the number of eligible issuer is less than 5 for two consecutive years. Bonds denominated in an emerging market currency are excluded from the index at the end of October,

after the market is classified as emerging market based on the yearly updated “Markit Global Economic Development Classification”.

5.2 Substitution

Bonds removed from the underlying indices at month-end are also removed from the indices and replaced by substitutes. The substitution procedures are specified in the Markit iBoxx EUR Liquid Index Guide available at iBoxx Documentation page on www.ihsmarkit.com.

6 Reinvestment of cash

For the EUR Liquid Corporates indices, cash received from coupon payments and non-substituted bonds are invested at the end of each month in the money market until the end of the following month. Cash from earlier months will also be re-invested at the end of each month. The interest rate applied is one-month LIBID.

YLIBID used in the EUR Liquid Corporates indices calculation is defined as the relevant one-month EURIBOR less 1/8 (12.5 basis points). The value for YLIBID will be published on the Markit iBoxx website on the last trading day of the month. Cash is invested in the index at the next rebalancing.

For the USD Liquid Corporates indices, cash received from coupon payments and non-substituted bonds are invested at the end of each month in the money market until the end of the following month. Cash from earlier months will also be re-invested at the end of each month. The interest rate applied is one-month LIBID. The LIBID rate used in the USD Liquid Corporates indices is the one-month USD SOFR rate less 1/8 (12.5 basis points).

7 Index calculation

The calculation follows the convention for the existing EUR and USD Liquid Corporates Indices.

7.1 Static data

Information used in the index calculation is sourced from offering circulars and checked against standard data providers.

7.2 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/>.

7.3 Calendar

S&P DJI publishes an index calculation calendar available on <https://www.spglobal.com/spdji/en/> under *iBoxx Indices Calendars*. This calendar provides an overview of the index calculation holidays of the iBoxx bond index families each year.

7.4 Data publication and access

The table below summarises the publication of Markit iBoxx EUR & USD Corporate Liquid Sector Indices at <https://www.spglobal.com/spdji/en/> for registered users and on the FTP server.

Table 3: Frequency, File type and Access

Frequency	File Type	Access
Daily	Underlying file – Bond level	FTP Server
	Indices file – Index level	FTP Server / website / Bloomberg for index levels only
Monthly	End of Month Components	FTP Server / website

7.5 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.

8 Index Governance

Index Committee

An S&P Dow Jones Indices Index Committee maintains the indices. All committee members are full-time professionals at S&P Dow Jones Indices. Meetings are held regularly. The Index Committee oversees the management of the indices, including determinations of intra-rebalancing changes, maintenance and inclusion policies, and other matters affecting the maintenance and calculation of the indices.

In fulfilling its responsibilities, the Index Committee has full and complete discretion to (i) amend, apply, or exempt the application of index rules and policies as circumstances may require and (ii) add, remove, or by-pass any bond in determining the composition of an index.

The Index Committee may rely on any information or documentation submitted to it or gathered by it that the Index Committee believes to be accurate. The Index Committee reserves the right to reinterpret publicly available information and to make changes to the indices based on a new interpretation of that information at its sole discretion. All Index Committee discussions are confidential.

The Index Committee is separate from and independent of other analytical groups at S&P Global. In particular, the Index Committee has no access to or influence on decisions by S&P Global Ratings analysts.

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

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.

For more information on index governance policies, please refer [here](#).

9 Changes to the Markit iBoxx EUR & USD Corporate Liquid Sector Indices

31-Dec-2021	<ul style="list-style-type: none">• Cash re-investment reference rate changed to SOFR
31-Mar-2021	<ul style="list-style-type: none">• Governance and Regulatory Compliance section added
25-May-2018	<ul style="list-style-type: none">• Updated bond selection methodology to include bonds that are being called 3 months or less prior to maturity - section 3.2.1 and ranking criteria in section 3.3

10 Further information

Client support

For client support please contact index_services@spglobal.com.

Formal complaints

Formal complaints should be emailed to spdji_compliance@spglobal.com.

Please note: spdji_compliance@spglobal.com should only be used to log formal complaints.

General index inquiries

For general index inquiries, please contact index_services@spglobal.com.

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.	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.

Disclaimer

Performance Disclosure/Back-Tested Data

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

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

Information presented prior to an index’s launch date is hypothetical back-tested performance, not actual performance, and is based on the index methodology in effect on the launch date. However,

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

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