

iBoxx USD Treasuries 7-10 (TTM JPY) Index Guide

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1) iBoxx USD Treasuries 7-10 (TTM JPY) Index

Now part of S&P Global, the iBoxx USD Treasuries 7-10 (TTM JPY) Index, administered by IHS Markit Benchmark Administration Limited, is an integral part of the global iBoxx index families, which provide the marketplace with accurate and objective reference indices by which to assess the performance of bond markets and investments.

The iBoxx USD Treasuries 7-10 (TTM JPY Hedged) Index is a foreign currency version of the iBoxx USD Treasuries 7-10 Index (the underlying index). An unhedged version of the index, iBoxx USD Treasuries 7-10 (TTM JPY Unhedged), is also provided. The indices are hedged/translated into JPY using the TTM JPY FX rates published by Bank of Tokyo-Mitsubishi at 10 am Tokyo time.

The iBoxx USD Treasuries 7-10 (TTM JPY) Indices are calculated on each Tokyo business day and hedged on a monthly basis on the last business day of each month, based on the value of the underlying iBoxx USD Treasuries 7-10 index from one day prior to the last business day of the month.

The underlying iBoxx USD Treasuries 7-10 index consists of US Treasuries issued by the United States federal government with a remaining time to maturity between 7 and 10 years. The underlying index is rebalanced monthly on the last calendar day of each month and the new index composition becomes effective on the first business day of the next month. The bonds in the index must meet all the index criteria described in the iBoxx USD Benchmark Index Guide publicly available on <https://www.spglobal.com/spdji/en/> under *Rules Benchmark*. In particular, the index contains nominal fixed rate US Treasuries with a minimum size of USD 1 billion. TIPS and Treasury floating rate notes are not eligible for the index.

All iBoxx indices are priced based on multiple data inputs. The iBoxx USD Treasuries 7-10 (TTM JPY) Index uses multi-source prices as described in the document *iBoxx Pricing Methodology* publicly available on <https://www.spglobal.com/spdji/en/> under *Methodology*.

This document covers the index calculation methodology.

2) Underlying index calculation summary

2.1) Static data

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

2.2) 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/>.

2.3) Rebalancing process

The underlying 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.

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 a 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, they will be included in the index.

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

2.4) Index weights

The iBoxx USD Treasuries 7-10 index is market value weighted.

2.5) 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.

2.6) Index calculus

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

3) iBoxx USD Treasuries 7-10 (TTM JPY) Index Calculation

3.1) TTM JPY FX Rate

The daily index calculation uses the TTM JPY FX rates published by Bank of Tokyo-Mitsubishi at 10 am Tokyo time. On the last Tokyo business day of each month the index is hedged using the 1-month forward contract as of the last business day of the month and the underlying index value as of one business day prior to the last business day of the month.

3.2) Hedging calculation

The index follows the standard hedging calculation for all iBoxx indices, adjusted for the specific TTM convention:

$$TR_t^{Hedged} = TR_{t-s}^{Hedged} \cdot \left(\frac{TR_{t-1}^{Local}}{TR_{t-s-1}^{Local}} \cdot \frac{FX_t^{TTM}}{FX_{t-s}^{TTM}} + \frac{FX_{t-s,t}^{TTM} - FX_t^{TTM}}{FX_{t-s}^{TTM}} \right)$$

With:

FX_{t-s}^{TTM}	TTM spot rate in JPY/USD on the last business day of the previous month (the hedge rebalance date)
FX_t^{TTM}	TTM spot rate in JPY/USD on the calculation date t
$FX_{t-s,t}^{TTM}$	Interpolated TTM forward rate, from the hedge rebalancing date t-s to the calculation date t, using the 1M TTM forward rate from the hedge rebalancing date t-s and a 30/360 day-count convention
TR_{t-1}^{Local}	iBoxx USD Treasuries 7-10 index level from one day prior to the calculation date t (or the latest available index level prior to the hedge rebalancing date, in case of index publication holidays for the iBoxx USD Treasuries 7-10 index)
TR_{t-s-1}^{Local}	iBoxx USD Treasuries 7-10 index level from one day prior to the hedge rebalancing date t-s (or the latest available index level prior to the hedge rebalancing date, in case of index publication holidays for the iBoxx USD Treasuries 7-10 index)
TR_t^{Hedged}	iBoxx USD Treasuries 7-10 (TTM JPY Hedged) index level of the calculation date t
TR_{t-s}^{Hedged}	iBoxx USD Treasuries 7-10 (TTM JPY Hedged) index level of the hedge rebalancing date t-s

3.3) Index history

The Index history starts on 31 December 2003. The indices have a base value of 100 on that date.

3.4) Settlement conventions

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

3.5) 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.

3.6) Publication of the Index

The iBoxx USD Treasuries 7-10 (TTM JPY) Indices are calculated every Tokyo business day. S&P DJI publishes an index calculation calendar, which is available on <https://www.spglobal.com/spdji/en/> under *iBoxx Indices Calendars*. Index data and bond price information is also available from the main information vendors.

Bond and index analytical values are calculated each trading day using the daily closing prices.

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

3.7) Data publication and access

The table below summarizes the publication of iBoxx USD Treasuries 7-10 (TTM JPY) Index in the *Indices* section on <https://www.spglobal.com/spdji/en/> for registered users and on the FTP server.

Table 1: Data publication frequency, file types and access

Frequency	File Type	Access
Daily	Indices files – Index level	FTP Server / S&P DJI website / Bloomberg (index levels only)

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

Table 2: Index identifiers

Index name	iBoxx USD Treasuries 7-10 (TTM JPY Hedged) Index	iBoxx USD Treasuries 7-10 (TTM JPY Unhedged) Index
Return type	TRI	TRI
ISIN	GB00BQ8WJ135	GB00BQ8WJ028
Ticker	IBXXT7JH	IBXXT7JU

3.8) 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.

4) 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](#).

5) Changes to the iBoxx USD Treasuries 7-10 (TTM JPY) Index

30-Jun-22	Launch of the iBoxx USD Treasuries 7-10 (TTM JPY Hedged) Index
12-Sep-22	Launch of the iBoxx USD Treasuries 7-10 (TTM JPY Unhedged) Index

6) Further information

Client support

For client support please contact:

E-mail:	indices@ihsmarkit.com		
Phone:	Asia Pacific	Japan: Singapore:	+81 3 6402 0127 +65 6922 4210
	Europe	General: UK:	+800 6275 4800 +44 20 7260 2111
	USA	General:	+1 877 762 7548

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 indices@ihsmarkit.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 in 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. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

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

Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US \$100,000 investment for a 12-month period (or US \$10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US \$1,650), the net return would be 8.35% (or US \$8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US \$5,375, and a cumulative net return of 27.2% (or US \$27,200).

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