

**Markit iBoxx Trepp CMBS
Original AAA Rolling
Index**

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1. Markit iBoxx Trepp CMBS Original AAA Rolling Index

The Markit iBoxx Trepp CMBS Original AAA Rolling Index is designed to reflect the performance of USD denominated commercial mortgage backed securities (CMBS) that are the original AAA-rated bonds with the highest weighted average life issued within the prior 12 months. The index rules aim to cover the liquid USD CMBS universe. As of 31 January 2016, the Index tracked 57 bonds and had a current notional of approximately USD 18.96 billion.

All static and pricing data for the indices is provided by Trepp, LLC.

This document covers the index rules and calculation methodology.

1.1 Index Governance

In order to ensure the independence and the objectivity of the Markit iBoxx Trepp CMBS Original AAA Rolling TRS Index, Markit will seek the advice from two distinct Index Advisory Committees. This is in line with the index advisory structure for the main Markit iBoxx index families.

1.1.1 Technical Committee

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

1.1.2 Oversight Committee

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

1.2 Publication of the Markit iBoxx Trepp CMBS Original AAA Rolling Index

All indices are calculated at the end of each business day and are re-balanced at the end of each month. The indices are calculated on the basis of end-of-day Trepp prices on each trading day, as defined in the iBoxx CMBS Index calculation calendar. The index calculation calendar is available in the indices section on the Markit website. Index data and bond price information is also available through other information vendors.

The index calculation calendar conforms to the recommendations of the Securities Industry and Financial Markets Association (SIFMA):

- The indices are calculated on each SIFMA recommended US trading day and on the last calendar day of each month.

2. Bond Selection Rules

The following selection criteria are used to determine the index constituents for the Markit iBoxx Trepp CMBS Original AAA Rolling universe:

- Deal type
- Bond type
- Country
- Deal notional
- Bond notional
- Rating
- Seniority
- Weighted Average Life
- Vintage
- Issue Capping
- Geographic Concentration
- Real Estate Type Concentration

2.1 Deal Type

Only conduit deals with public information available are eligible. The following deal types are specially excluded:

- Large loan
- Single-Borrower/Single-Asset

2.2 Bond Type

General inclusion criteria:

- Pass-through CMBS bonds without pre-determined prepayment schedule are eligible for the indices

In particular, the following bond types are eligible:

- Fixed-rate bonds
- WAC/pass-through bonds

The following bond types are excluded:

- Bonds that have ever been floating-rate
- Planned Amortization Class (PAC) bonds
- Multifamily-directed bonds
- Interest-only (IO) bonds
- Principal-only (PO) bonds
- Modeling bonds
- Non-pooled single-asset bonds
- Accretion (Z) bonds
- Non-floater variable bonds, including PEZ, PEX, PST, EC tranches
- Bonds secured by underlying assets that are credit-linked notes, synthetic CDOs or any similar synthetic obligations
- Agency CMBS bonds
- Private placements

If Markit has reasonable cause to believe that a bond is a retail bond or private placement, and Markit is unable to determine otherwise from the issuer or lead manager(s), the classification of a bond as a retail bond or private placement will be made at Markit's discretion based on information available at the time of determination. The trustee report (or other similar periodic statement) and offering documentation (prospectus supplement or offering circular) related to each bond may be used by Markit to make the determination.

2.3 Country

All constituents should be bonds in US conduit deals that are denominated in USD.

2.4 Deal Notional

All deals in the Markit iBoxx Trepp CMBS Original AAA Rolling Index must have a minimum deal notional of USD 500 million at issuance.

2.5 Bond Notional

All bonds in the Markit iBoxx Trepp CMBS Original AAA Rolling Index must have a minimum bond notional of USD 100 million at issuance and current factor must be greater than or equal to 0.5 on the rebalancing day.

2.6 Credit Rating

All bonds in the Markit iBoxx Trepp CMBS Original AAA Rolling Index must have a rating of no lower than AAA from any of the rating agencies at issuance and must have a current rating of no lower than C from any of the rating agencies on the rebalancing day. Ratings from the following three credit rating agencies are considered:

- Fitch Ratings
- Moody's Investor Service
- Standard & Poor's Rating Services

Only issue ratings are considered in the bond selection process. Issuer ratings are not taken into account.

2.7 Seniority

To be included in the Markit iBoxx Trepp CMBS Original AAA Rolling Index, all bonds must be the super-senior bond in a given deal and comprise the last cash flow tranche, where the last cash flow tranche is the super-senior tranche with the highest weighted average life.

2.8 Weighted Average Life

All bonds in the Markit iBoxx Trepp CMBS Original AAA Rolling Index must have a minimum weighted average life of 8 years, using a 0% CPY scenario, as of the rebalancing date. If the weighted average life of a constituent falls below 8 years during the month, the constituent will be removed from the index on the next rebalancing date. If the weighted average life of the bond goes above 8 years afterwards, it is eligible to come back into the index on the next rebalancing date if the bond satisfies all other criteria.

2.9 Vintage

All bonds must have been issued no earlier than 12 months prior to the rebalancing date.

2.10 Issue Capping

Only one bond will be selected per deal. The selected issue will be the bond with the highest original subordination percentage that meets all of the other selection criteria. Of those bonds, if there is more than one that ties for the highest original percentage, then the bond with the highest weighted average life will be selected. Next, if there is more than one bond that ties for the greatest original subordination percentage first and highest weighted average life second, then the bond with the greatest original balance will be selected from the securities within the deal that remain.

2.11 Geographic Concentration

The commercial properties that secure any bond in the Markit iBoxx Trepp CMBS Original AAA Rolling Index must be sufficiently geographically diverse so that properties in one state in the United States do not represent more than forty percent (40%) of the aggregate value of the properties securing the CMBS Offering.

2.12 Real Estate Type Concentration

No single real estate type (multi-family, office, etc) can represent one hundred percent (100%) of the aggregate value of the properties securing the CMBS Offering.

3. Bond Classification

All bonds are classified based on the concentration of real estate types of the underlying loans as sourced from Trepp, LLC.

The main sector classifications within the iBoxx CMBS index family are described below.

3.1 Overall Bond Classification Scheme

The following classification scheme is used for the bonds:

- Level 0 USD
- Level 1 D
- Level 2 Non-Treasuries
- Level 3 Collateralized
- Level 4 CMBS
- Level 5 Dominant/Diversified
 - Dominant: when the most concentrated real estate type in the deal is not lower than 50%
 - Level 6-8 Top 1 real estate type
 - Diversified: when the most concentrated real estate type in the deal is lower than 50%
 - Level 6-8 Top 3 real estate types which are higher than 10%

Level 0	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Retail	Retail	Retail Anchored
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Retail	Retail	Retail Unanchored
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Office	Office	*
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Residential	Multifamily	*
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Travel & Leisure	Hotel	Hotel Full
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Travel & Leisure	Hotel	Hotel Limited
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Travel & Leisure	Hotel	Hotel Other
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Health Care	Health Care	*
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Industrials	Industrials	*
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Speciality	Speciality	Credit Tenant Loan (CTL)
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Speciality	Speciality	Mobile Home
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Speciality	Speciality	Mixed Use
USD	D	Non-Treasuries	Collateralized	CMBS	Dominant	Speciality	Speciality	Others
USD	D	Non-Treasuries	Collateralized	CMBS	Diversified	Diversified	A combination of 2-3 sectors out of level 7 sectors under "Dominant"	*

The following seniority classification scheme is used for bonds:

Seniority Level 1	Seniority Level 2	Seniority Level 3 (sequence of payment)
SEN	Supersenior	1
	MezzSenior	2-18
	SubSenior	2-18

SUB

Subordinated

2-18

4. Index Calculation

4.1 Static Data

Information used in the Markit iBoxx Trepp CMBS Original AAA Rolling Index calculations, including bond and deal static data and payment information, is sourced from Trepp, LLC.

4.2 Bond Prices

Bond price information used in the Markit iBoxx Trepp CMBS indices is sourced from Trepp, LLC. Bid prices are derived from Trepp, LLC, while ask prices are derived by applying a bid-ask spread provided by Markit's Pricing Data service.

4.3 Rebalancing Process

All Markit iBoxx Trepp CMBS indices are rebalanced monthly at month-end ("rebalancing day"). Classifications are determined four business days before the end of the month. Except ratings, changes to bond reference data such as notional outstanding are only taken into account if they are publicly known three business days before the end of the month. Any changes after the index cut-off day (t-3) will not be considered in the current re-balancing process, but will become effective at the end of the following month. Rating cut-off day for index membership is two business days before the end of the month (t-2). New bonds issued are taken into account if they are publicly known to close three business days before the last calendar day of the month and if their rating and amount outstanding has become known at least three business days before the end of the month.

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.

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

4.4 Index Data

Calculation occurs on a daily basis as soon as Trepp, LLC, prices are available. Price quotes are provided and the indices calculated every day in the SIFMA calendar and for the last calendar day of each month. Index calculation is based on bid quotes. New bonds are included in the indices at their respective ask prices when they enter the index family. In the event that no new quotes for a particular bond are received, the index will continue to be calculated based on the last available Trepp, LLC, prices. This might be the case in periods of market stress, or disruption as well as in illiquid or fragmented markets.

All bonds are assigned to sub-indices according to their classification. The assignment of a bond to a certain maturity bucket is based on its expected remaining life. All bonds remain in their maturity bucket for the entire month.

4.5 Index Calculus

Cash received from interest payment, principal payment or prepayment will not be reinvested into the index until next rebalancing day.

For specific index formulae please see the appendix in the Markit Trepp iBoxx CMBS Benchmark Index Guide.

4.6 Treatment of special intra-month events

4.6.1 Missing Prices and Analytics

There are circumstances where some bonds may stop being priced for a few days by data providers. To avoid unnecessary turnover in index membership, bonds will be considered eligible for the Markit iBoxx Trepp CMBS Original AAA Rolling Index at rebalancing as long as prices have been missing for no longer than seven business days prior to the rebalancing date. If a bond has been included in the index and does not have prices during the month, the latest price will be carried forward until the earlier of a) the next rebalancing for index calculation or b) when the bond resumes being priced. The bond will be excluded for index analytics calculations such as yield, spread and duration during the month.

4.6.2 Newly Issued Bonds

In normal cases, accrued interests and unrealized cash are calculated using the bond coupon rate at the last ex-dividend day. For newly issued bonds, the coupon rate at the last ex-dividend day is not available, so the first available coupon rate is used for the first accrual period.

4.6.3 Distressed Bonds

Distressed bonds are defined as bonds with bid prices lower than 10. Markit iBoxx Trepp CMBS Original AAA Rolling Indices do not include distressed bonds. If a constituent turns into a distressed bond during the month, it will be excluded for index analytics calculations such as yield, spread and duration during the month and removed from the index on the next rebalancing day.

4.7 Index Weighting

The Markit iBoxx Trepp CMBS Original AAA Rolling Index is base-market-value weighed, with the bond's market value on the rebalancing day as the weighting factor.

4.8 Index History

The index history starts on 31 December 2012 with a base index value of 100 on that date.

4.9 Settlement Conventions

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

4.10 Calendar

Markit publishes an index calculation calendar which is available on the Markit website. This calendar provides an overview of the index calculation times of the Markit iBoxx bond index families in a given year.

4.11 Index Restatement

Index restatement follows the policy described in the *Index restatement policy* document, available on the Markit iBoxx Rules page on the Markit website in the Methodology Documentation section.

4.12 Index Review

Index methodology reviews for the indices outlined within this guide are performed on a periodic basis or when market developments occur that may warrant index rule changes. Any material changes to the methodology governing the indices are published on the Markit website.

4.13 Data Publication and Access

The table below summarises the publication of Markit iBoxx CMBS TRS Index in the indices section of the Markit website and on the FTP server.

Daily Files	Access
<ul style="list-style-type: none"> Underlying file – Bond level Indices files – Index level 	Markit FTP Server Markit FTP Server/ Markit website/ Bloomberg for index levels only
Weekly Files	
<ul style="list-style-type: none"> Previews_components 	Markit FTP Server/ Markit website
Monthly files	

<ul style="list-style-type: none">• End of Month Components• XREF files	Markit FTP Server/ Markit website Markit FTP Server
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5. Further Information

- Glossary of key terms is available in the Glossary document, available on www.markit.com
- For contractual or content issues please refer to

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- Formal complaints can be sent electronically to a specifically dedicated email address – complaints_indices@markit.com. Please note complaints_indices@markit.com should only be used to log formal complaints. For any general index enquiries, please contact Markit iBoxx indices support group iBoxx@Markit.com
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