



IHS Markit™

IHS Markit IOS Index Rules

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Introduction

Each IOS index (each, an “**IOS Index**” and collectively, the “**IOS Indices**”) shall be composed of the interest component of residential mortgage loan pools (each, a “**Reference Pool**”) issued by the Federal National Mortgage Association (“**Fannie Mae**”), the Government National Mortgage Association (“**Ginnie Mae**”) or the Federal Home Loan Mortgage Corporation (“**Freddie Mac**,” and together with Fannie Mae and Ginnie Mae, the “**Designated GSEs**” and each, a “**Designated GSE**”) issued in the Designated Period (as defined below) that meet the criteria specified in these IOS Index Rules.

I. Administration of the Index

- 1.1. There shall be one or more sub-index of each IOS Index (each, an “**IOS Sub-Index**” and collectively, the “**IOS Sub-Indices**”), satisfying the criteria in Section 3.2 and Section 3.3 below. A new IOS Index and the related IOS Sub-Indices will be launched semi-annually on March 12th (or the next Business Day in the event that such day is not a Business Day) and September 12th (or the next Business Day in the event that such day is not a Business Day) (each such date, a “**Roll Date**”) as directed by a Member Majority; provided that if a Member Majority votes to change the Roll Date of an IOS Index or an IOS Sub-Index, the Roll Date of such IOS Index or an IOS Sub-Index shall be the date designated by such Member Majority.
- 1.2. IHS Markit Benchmark Administration Limited (“**IMBA UK**” or the “**Administrator**”), shall from time to time publish an updated list of eligible members participating in determinations relating to the IOS Indices (the “**IOS Members**”).
- 1.3. Products based on the initial IOS Sub-Indices will begin trading on March 12th, 2010, or such other day approved by at least seventy-five percent (75%) of the Eligible IOS Members.
- 1.4. Except as otherwise provided herein, these IOS Index Rules will be subject to the [General Rules Applicable to Voting and the Rules for Member Eligibility to Vote, each published with respect to the Dow Jones CDX Indices and for purposes of the Rules for Member Eligibility to Vote, each IOS Index will be considered a Covered Index]
- 1.5. The determination of each IOS Index will be administered by the Administrator based upon the rules and procedures provided herein.
- 1.6. Except to the extent otherwise set forth in these IOS Index Rules, with respect to any vote pursuant to these IOS Index Rules, the outcome shall be determined by the votes of a majority of all IOS Members (a “**Member Majority**”).
- 1.7. All times referred to in these IOS Index Rules refer to local time in New York, New York.

II. Administration of the Index

- 2.1 It is the obligation of each IOS Member to provide end-of-day and other periodic prices within the time frame specified by the IOS Pricing Rules (as defined below) that are duly solicited by the Administrator on each day other than Saturday, Sunday and federal holidays of the United States of America (“**United States Federal Holidays**”).
- 2.2 The Administrator shall monitor and maintain a record of each IOS Member’s participation in providing prices in respect of the IOS Indices. At the end of each day on which the Administrator solicits prices from each IOS Member, the Administrator will send a written notice to each IOS Member informing such IOS Member whether it has met its obligations under the IOS Pricing Rules to provide prices for such day, and if it has not met such obligations, briefly stating how it has failed to meet such obligations. If, between the annex date and the maturity date of any IOS Index, an

IOS Member fails to provide prices for each IOS Sub-Index related to each IOS Index (i.e., one price per IOS Sub-Index) more than fifteen percent (15%) of the time, the Administrator shall send such IOS Member a written notice advising that such IOS Member has been “Suspended” for purposes of these IOS Index Rules and informing it of the reason(s) it has been Suspended. Such IOS Member shall remain Suspended until the next Roll Date by which the IOS Member has provided prices for each IOS Sub-Index related to each IOS Index (i.e., one price per IOS Sub-Index) more than eighty-five percent (85%) of the time.

- 2.3 At any time, an IOS Member shall be deemed not “Eligible” with respect to any vote under these IOS Index Rules or any polling or submission with respect to the Roll Date of an IOS Index pursuant to Section 3.3, Section 3.4 or Section 3.5, if at such time such IOS Member remains Suspended pursuant to Section 2.2 above. Notwithstanding the foregoing, IOS Members who are not Suspended (“**Eligible IOS Members**”) shall at all times have the right to waive any or all of the foregoing criteria and to deem an IOS Member to be an Eligible IOS Member by consenting vote of at least seventy-five percent (75%) of the Eligible IOS Members.

III. Polling Process for Roll Dates

- 3.1 (a) No later than the tenth Business Day prior to each Roll Date of a new IOS Index (the “**Review Date**”), the Administrator shall conduct a review of all Reference Pools issued by the Designated GSEs during a period designated by the Member Majority (a “**Designated Period**”), each of which satisfy, with respect to the initial IOS Sub-Indices, the criteria in Section 3.2 below, and with respect to any subsequent IOS Sub-Indices thereafter, the criteria in Section 3.3 below. The Administrator shall determine, with respect to each such Reference Pool, the aggregate face amount of the Reference Pool (the “**Deal Size**”). Based on such review, the Administrator shall create a list (each, an “**Initial List**”), consisting of all Reference Pools, ranked in decreasing order by Deal Size.
- 3.2 The initial IOS Index (the “**IOS.FN30 Index**”) shall consist of three IOS Sub-Indices: IOS.FN30.400.09 Sub-Index, IOS.FN30.450.09 Sub-Index, and IOS.FN30.500.09 Sub-Index (collectively, the “**IOS.FN30 Sub-Indices**” and each, an “**IOS.FN30 Sub-Index**”) meeting the following criteria as of the Review Date:
- (i) Each related Reference Pool must be issued by Fannie Mae and have a pool prefix designation of “CL”.
 - (ii) Each Reference Pool must be USD-denominated and bear a fixed rate of 4% (in the case of the IOS.FN30.400.09 Sub-Index), 4.5% (in the case of the IOS.FN30.450.09 Sub Index) or 5%, (in the case of the IOS.FN30.500.09 Sub-Index).
 - (iii) Each Reference Pool must contain fixed rate, conventional, residential mortgage loans with an original stated maturity of 30 years or less.
 - (iv) Each Reference Pool must have a minimum of 90% of the balance originated in the Designated Period. Each Reference Pool must have been issued within the related Designated Period.
 - (v) The monthly report (or other similar periodic statement) issued by Fannie Mae related to each Reference Pool be reasonably obtainable by the Administrator.
- 3.3 Any IOS Index and the related IOS Sub-Indices launched on a subsequent Roll Date shall meet the following criteria as of the related Review Date:

- (i) Each related Reference Pool must be designated by a Designated GSE.
- (ii) Each Reference Pool must be a USD-denominated and bear a fixed rate.
- (iii) Each Reference Pool must contain fixed rate, conventional, residential mortgage loans with an original stated maturity of 30 years or less.
- (iv) Each Reference Pool must have been issued within the related Designated Period.
- (v) The monthly report (or other similar periodic statement) issued by the
- (vi) Designated GSE related to each Reference Pool be reasonably obtainable by the Administrator.

3.4 No later than the [seventh (7th)] Business Day prior to the Roll Date, the Administrator shall simultaneously provide to the Eligible IOS Members and publicly disseminate (through its website or as otherwise agreed between Markit and the Administrator) the Initial List, and will solicit from each related IOS Member a vote as to which Reference Pool thereof, if any, in the related Initial List in such IOS Member's judgment should be removed from such list. The Administrator will eliminate from the related Initial List those Reference Pools receiving votes for removal from at least [seventy-five percent (75%)] of the related IOS Members of such IOS Index. The Administrator will inform the related IOS Members of the Reference Pools that have been eliminated from the related Initial List. Each IOS Member shall notify the Administrator of its vote no later than 5:00 p.m. on the [first (1st)] Business Day following receipt of the Initial List (the "**Submission Deadline**"). If a IOS Member fails to provide votes by the Submission Deadline, the Administrator may disregard such IOS Member's votes. Upon receipt of the votes timely and properly submitted by the IOS Members, the Administrator shall create a master list for each IOS Index and related IOS Sub-Indices (each, a "**Master List**") of the Reference Pools. The Reference Pools in each Master List shall be ranked in decreasing order by Deal Size.

3.5 If the Administrator is unable to create a Master List for an IOS Index in accordance with the foregoing provisions, the Administrator shall take such action with respect to the creation of the Master List as is directed by a Member Majority.

3.6 Promptly following the determination thereof and, in any event, no later than 11:00 a.m. on the Business Day prior to the Roll Date, the Administrator will simultaneously provide to the IOS Members and publicly disseminate (through its website or as otherwise agreed between Markit and the Administrator) the composition and annex of each new IOS Index and the related IOS Sub-Indices to be launched on that Roll Date. At such time, the Administrator will also publicly disseminate (through its website or as otherwise agreed between Markit and the Administrator) the current list of the related IOS Members for each new IOS Index and related IOS Sub-Indices.

IV. Composite Process and Calculation Rules (the "IOS Pricing Rules")

4.1 For each IOS Sub-Index, the Administrator will solicit closing mid-market prices (excluding any accrued fixed amount) from all IOS Members, which price shall represent the present value of the aggregated cashflows of the related Reference Pools. Such prices will be submitted either by spreadsheet (or any other electronic delivery format designated as acceptable by the Administrator) or, later, via the Administrator's automated mechanism between 3:00 p.m. and 4:00 p.m. each day other than Saturday, Sunday, and United States Federal Holidays; provided that on any day that Securities Industry and Financial Markets Association ("SIFMA") recommends closing the fixed income markets early, prices will be submitted within thirty (30) minutes after the time set by SIFMA for the closing of the fixed income markets.

The Administrator will employ a filtering process which entails taking the received quotes, discarding the top and bottom quartiles and taking the arithmetic mean of what remains. The quoted fixing value will be reported as a price rounded to the nearest 1/64th of a percentage. The number of prices q in each discarded quartile will be given by $q = \text{int}(N_c/4)$ where N_c is the total number of contributors. Examples are shown in the table below:

Table of Discarded Quartile Examples:

Number of Submitters	Upper Quartile Discards	Lower Quartile Discards	Number of Submissions used in Composite
1	0	0	No composite calculated
3	0	0	3
4	1	1	2
5	1	1	3
7	1	1	5
8	2	2	4
11	2	2	7
12	3	3	6
15	3	3	9
16	4	4	8
19	4	4	11
20	5	5	10

4.2 Notwithstanding the foregoing, if the Administrator receives notice from at least seventy-five percent (75%) of Eligible IOS Members that it has become impossible to obtain or provide a commercially reasonable firm quote of the mid-market price for any IOS Sub-Index, the Administrator shall publicly consult (in accordance with the IMBA UK Administrator's Changes and Cessations policy) to confirm with all stakeholders that the termination of pricing for such IOS Sub-Index is appropriate.

4.3 With respect to IOS Member's Confidential Information:

- (a) Without limiting Markit's confidentiality obligations under the Index and Trademark License Agreement entered into between Markit and each IOS Member, Markit acknowledges that it or its employees may, in the course of performing its responsibilities under these IOS Index Rules or the Index and Trademark Licensing Agreement (the "**License Agreement**"), be exposed to or acquire information which is proprietary to or confidential to such IOS Member or its affiliated companies or their clients or to third parties to whom the IOS Member owes a duty of confidentiality. Subject to Section 4.2(b) of these IOS Index Rules, any and all non-public information of any form obtained by Markit or its employees in the performance of these IOS Index Rules and/or the License Agreement shall be deemed to be confidential and proprietary information. Markit will hold such information in strict confidence and will not copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give or disclose such information to third parties or use such information for any purposes

whatsoever other than on an anonymous and aggregated basis in the provision of services and will advise each of its employees who may be exposed to such proprietary and confidential information of their obligations to keep such information confidential.

- (b) Confidential information shall not include information which is (i) in or becomes part of the public domain other than by disclosure by Markit in violation of these IOS Index Rules or the License Agreement, (ii) demonstrably known to Markit previously, (iii) independently developed by Markit outside of these IOS Index Rules or the License Agreement or (iv) rightfully obtained by Markit from third parties.
 - (c) It is understood and agreed that in the event of a breach of this Paragraph, damages may not be an adequate remedy and the relevant IOS Member shall be entitled to seek injunctive relief to restrain any such breach, threatened or actual.
 - (d) This Paragraph shall survive expiration or termination of the License Agreement.
- 4.4 With respect to IOS Member's right to use IOS Index data/information: in addition to the rights granted to a IOS Member under the License Agreement for use of the Markit IOS in creating derivative products, the IOS Member may use and distribute the data and information included in and/or related to the IOS Indices in research publications as well as to analyze, manipulate, publish, and prepare reports.
- 4.5 On each day other than Saturday, Sunday, and United States Federal Holidays, Markit will publish on its website (www.markit.com) composite mid-market prices at the aggregate index level no later than 5pm.

V. Additional Pricing Considerations

- 5.1 Liquidity in the IOS Index has declined over time, with trading no longer occurring on a regular basis for all Current and Prior IOS Sub-Indexes. As a result, the closing mid-market prices submitted by IOS Participants may be estimated values for transactions under the IOS Standard Terms Supplement, rather than actual transacted prices.
- 5.2 IOS Members reserve the right to stop submitting prices on any Sub-Index with less than 10 (ten) trades outstanding in the DTCC Trade Information Warehouse Section 1 Open Positions report.
- 5.3 In order to calculate the official composite value for a particular IOS Sub-Index, the Administrator must receive closing mid-market prices from three (3) IOS Members. If, on any date, the Administrator receives fewer than three (3) closing mid-market prices for an IOS Sub-Index, the Administrator will not publish a composite value for such IOS Sub-Index on such date. The methodology for calculating an official composite value for a IOS Sub-Index will be subject to change upon an affirmative vote of at least seventy-five percent (75%) of Eligible IOS Members.
- 5.4 On all dates, the Administrator will seek to receive mid-market price contributions from all IOS Members. This may delay the publication of index levels but will mean a consistent number of contributions to avoid artificial index level movements.
- 5.4.1 For high-importance dates such as accrual period resets and month-end, the Administrator will not publish the index level until it receives contributions from all contributing IOS Members.

In case the Administrator cannot contact an IOS Member by 6 pm ET, and the Administrator has received contributions from at least 3 IOS members, the Administrator reserves the right to publish the index level without contributions from all IOS Members.

- 5.4.2 For all other dates, the Administrator will make every effort to receive prices from all contributing IOS members.

In case the Administrator cannot contact an IOS member by 5 pm ET, and the Administrator has received contributions from at least 3 IOS members, the Administrator reserves the right to publish the index level without contributions from all IOS members.

In case the Administrator can contact an IOS member, but that IOS member does not provide a contribution by 6 pm ET, the Administrator reserves the right to publish the index level if it has received contributions from at least 3 IOS members.

VI. Governance and Regulatory Compliance

IHS Markit Benchmark Administration Limited (IMBA UK) is the Index Administrator of the IOS indices. Information on the Administrator'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 the Administrator can be found on the [Administrator's website](#).

Disclaimer

The Administrator does not undertake any duty of care and will not be liable to any party to a transaction referencing a Markit IOS Index, or related Sub-Index, for any form of damages, whether direct, indirect, special, consequential or otherwise, that might arise in connection with the Administrator's performance of its duties under the Rules, except in the case of the Administrator's gross negligence, fraud or wilful misconduct.