Index Announcement

Update: Implementation of Lockout Period Prior to Month-End Rebalancing for Bloomberg Fixed Income Indices

Bloomberg Index Services Limited (BISL) will be shifting the membership Determination Date for all Bloomberg fixed income indices to occur two business days prior to month-end rather than on month-end as has been done historically. This effectively introduces a month-end Lockout Period across the BISL family of standard and custom fixed income indices. As a result, bonds qualifying for the Returns Universe of the upcoming month will be selected/determined two business days prior to the month-end and bond data changes during the last two business days of the month will not alter the composition of the next month's Returns Universe.

This change is being targeted to take effect for the first time in the rebalance at the end of March, setting a Determination Date of March 27th, 2025. The decoupling of the determination date and the rebalance date is intended to provide more stability in the index membership and certainty as to which bonds qualify for the Returns Universe prior to month-end. The practice of separating membership selection from index rebalancing is being made after a consultation.

Glossary of Terms

As part of this update to the index methodology, BISL has provided definitions for new terms as well as clarification of existing terms. Any terms used in this document but not listed here are defined in the Bloomberg Fixed Income Index Methodology.

- Determination Date: The date on which the membership for the next month's Returns Universe is set. The data from this day is used to qualify bonds for an index and set their amounts outstanding for the upcoming month's Returns Universe. Note that a short list of involuntary corporate actions that occur after this date but before the rebalance date will be processed. See the section "Changes to Bond Data" for more details on these corporate actions.

- Lockout Period: The time period between the Determination Date and the Rebalance Date. During the Lockout Period, bond issuance and changes to existing bonds will not alter the composition of the current Projected Universe and next month's Returns Universe.

- Rebalance Date: The date on which the index rebalances. The index performance over the month uses bond prices (and derived weights) from this date as the beginning values. All BISL fixed income indices will continue to rebalance as of close of business on the last business day of each month.

- Effective Date: The date on which the rebalance has been applied. All Bloomberg fixed income indices will continue to apply the rebalance effective on the first business day of each month.

All dates referenced above will use a global calendar (N.B., the global calendar has one holiday: New Years Day) and therefore all BISL global fixed income indices will use the same determination and rebalance dates regardless of regional specific holidays in the last two days of the month.

While the standard methodology will be updated to use a two-day Lockout Period (i.e., a Determination Date of two business days prior to month end), For custom indices, BISL will also provide flexibility to apply a custom Lockout Period.

Scope of Impacted Indices

All Bloomberg Series-L fixed income indices will be updated to use a two-day Lockout Period. This includes the Flagship Global Aggregate, US Aggregate, Pan-European Aggregate, Asian Pacific Aggregate, Convertibles, Inflation-Linked,

Emerging Markets, Bloomberg MSCI Fixed Income and Municipal Indices. This change will not impact Series-B, AusBond, and Legacy Bloomberg indices.

Changes to Bond Data

This change does not affect how Bloomberg processes and manages bond-level data on a daily basis. Changes to bond data including ratings and classification changes will be provided in the daily bond data files. The updated methodology merely affects which changes are reflected immediately in the Projected Universe and which will be held back from impacting the Projected Universe until after month end.

For example, when applying a two-day Lockout Period, a downgrade from investment grade to high yield occurring on June 30 will not affect a bond's inclusion in investment grade indices in the July Returns Universe because it occurs during the Lockout Period. Instead, the downgrade will result in bonds being removed from the investment grade Projected Universes at the close of July 1 and removed from investment grade Returns Universes in August.

As a result of setting the Determination Date two days prior to month end, the following events will be held back from impacting index membership during the Lockout Period:

- New issues including government and central bank auctions [1]

- Taps and increases from re-openings

- Ratings changes

- Classification changes

- Country of risk changes

- Refunding status for US Municipal securities

- Defaults

- Other data changes that impact membership inclusion criteria including changes to ESG data received from any ESG data provider except MSCI (for ESG data received from MSCI, please see the paragraph "Bloomberg MSCI ESG Fixed Income Indices and Data" below).

During the Lockout Period, changes from certain involuntary corporate actions will be applied and reflected as they occur and will therefore impact the Returns Universe for the upcoming month:

- Called in-full or redeemed in-full

- Mandatory tender or full tender

- Full exchange of bonds

- Matured bonds (including coupon adjustment date for fixed to float bonds)

Impact on Index Flags

BISL has used index flags as a way to improve the management of index membership. They provide a way to simplify identification of index eligible securities, identify crossover exposure across index families, and simplify index turnover analysis. As part of this change to the methodology, index flag values will reflect the standard two-day month-end Lockout Period from the implementation date forward.

Data Referencing "Beginning of Month"

BISL provides data fields that reference the beginning of month (BOM) values from the last business day of the prior month. To reflect the updated methodology, fields used in membership selection will display the value from the prior month's Determination Date.

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[1] Note that US Treasury bonds and notes are included in the Projected Universe the day after the announcement date which is typically 3-5 business days prior to the auction and therefore before the Determination Date

Bloomberg MSCI ESG Fixed Income Indices and Data

As announced on June 20, 2023, BISL applies a freeze on MSCI ESG data five weekdays[2] prior to month-end. The ESG data freeze holds data constant during this time period (except in the event of a data correction). This data freeze is applied prior to the Determination Date (two days prior to month-end as specified above) and therefore this frozen data will also be used for the index membership determination for the Bloomberg MSCI ESG, Climate and Green Bond Fixed Income Index families.

Index Reporter Files (Published Index Data)

BISL currently produces 5 primary types of files through Index Reporter.

1. <u>Index Aggregate file</u>: List of indices and their aggregated attributes and returns.

2. <u>Maps (Statistics) file</u>: File contains mapping of index constituent bonds and the amounts, weights, and scaling factors for the bonds per index for the Projected Universe of the index.

3. <u>Maps (Returns) file</u>: File contains mapping of index constituent bonds and the amounts, weights, and scaling factors for the bonds per index for the Returns Universe of the index.

4. <u>Bond Record (Statistics) file</u>: File contains bond level data for each bond in indices and the official index data used to determine what indices a bond qualifies for. This file also provides details of bond level analytics that are aggregated for the Forward index membership.

5. <u>Bond Record (Returns) file</u>: File contains bond level data for each bond in indices and the official index returns data for constituent bonds used in index aggregate returns calculations.

There will be no structural or formatting changes to any of the files listed above. Each will continue to provide up-to-date bond and index results. The Maps (Statistics) file provides the Projected Universe membership and will continue to do so following the methodology update whereby the universe will appear frozen during the Lockout Period.

A new data field will be available for clients to add to the Index Aggregate file. This new field will provide the determination date applied to an index in order to compute the membership. This date will be listed for each index uniquely.

Supplemental Bond Record File

The existing Bond Record (Statistics) file will continue to include the latest data available on the securities (i.e., data updates will not be "held back" when they occur during the Lockout Period).

For clients and systems that reconstruct indices using the Bond Record details, a supplemental version of the Bond Record (Statistics) file will be made available which merges the data that was used to determine index membership (i.e., bond data from the Determination Date) with live data used to produce index results. Most bond terms and conditions data will appear held constant during the Lockout Period while prices, accrued interest, market values, and other analytics will continue to update.

This new file will appear as a near-duplicate of the existing file (i.e., same columns, headers, settings, and fields). It will be delivered daily, and the data provided will only differ during the two-day Lockout Period. This new file will have the same naming convention as your current file but will be designated with a prefix of lockout.

Example

Existing file name:	20240918_statistics_8617_9262_std_bonds.txt
New file name:	lockout_20240918_statistics_8617_9262_std_bonds.txt

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[2] The MSCI ESG data freeze is applied uniformly across the global family of Bloomberg MSCI fixed income indices, irrespective of regional holidays and publication schedules. Since the only global holiday is New Year's Day, the freeze will occur exactly five weekdays or seven calendar days from month-end.

This file may be useful to clients who wish to view the terms and conditions data that was used for purposes of qualifying bonds for index membership alongside the index membership itself.

Use Cases and Examples

The following section provides examples of common events and explains how they would be processed when the Determination Date is set two days prior to month end.

Case 1: New issue during Lockout Period

- US Agg eligible bond Citi Corp 4.962% 8/6/26 ISIN US17325FBJ66 was priced on July 30, 2024
- With a Lockout Period of 2 business days the index Determination Date for July month-end would be July 29, 2024
- Bond would enter the Projected Universe for the index on August 1, 2024
- Bond would enter the Returns Universe for the index on September 1, 2024

Case 2: Full exchange of bond during Lockout Period

- Bond in the US Agg Chenier Energy Partners 5.95% 6/30/2033 ISIN US16411QAP63 in the US Agg in February 2024
- With a Lockout Period of 2 business days the index Determination Date for February month-end would be February 27, 2024
- Bond was exchanged in full on February 29, 2024, for ISIN US16411QAQ47
- Implications: Full exchanges are processed during the Lockout Period
- On February 29, 2024, the exchange would be processed with old bond immediately leaving the Returns Universe and new bonds replacing it.

Case 3: Ratings upgrade/downgrade during the Lockout Period

- The index rating for Videotron Ltd 3.625% 6/15/2029 ISIN US92660FAN42 changed from high yield to investment grade on May 30th, 2024, when the Moody's rating was upgraded from Ba2 to Baa3.
- With a Lockout Period of 2 business days the index Determination Date for May month-end would be May 29, 2024
- The bond would enter the Projected Universe for investment grade indices on June 1, 2024, and leave the Projected Universe of the high yield indices on the same date.
- The bond would enter the Returns Universe for investment grade indices on July 1, 2024, and would exit the Returns Universe of the High Yield Index on the same date.

Case 4: Partial redemption from sinking fund or other partial call

- New York State Housing Finance 0.75% 11/1/2025 CUSIP 64987JDR9 had $10,640,00 redeemed on June 28, 2024, reducing the amount outstanding from $135,705,000 to $125,065,000.
- With a Lockout Period of 2 business days the index Determination Date for June month-end would be June 26, 2024.
- The bond's amount outstanding in the Projected Universe of the index will remain at $135,705,000 through the end of June and will be reduced from $135,705,000 to $125,065,000 on July 1, 2024
- The bond's amount outstanding in the Returns Universe of the index will be unchanged on July 1 and would be reduced from $135,705,000 to $125,065,000 on August 1, 2024

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