

## USD ICE Bank Yield Index - Calculation Methodology

The U.S. Dollar ICE Bank Yield Index is designed to measure the average yields at which investors are willing to invest U.S. dollar funds over one-month, three-month, six-month and twelve month-periods on a wholesale, senior, unsecured basis in large, internationally active banks. The rates generated by the Index methodology implicitly incorporate several distinct elements, including:

- An underlying U.S. dollar risk-free rate of return;
- A term structure for this risk-free rate (i.e. the expected average term-premium over the overnight risk-free rate for forward-looking time horizons); and
- An average premium that investors expect to earn for accepting wholesale, senior, unsecured bank credit and liquidity risk over the various forward-looking time horizons.

### Calculation and publication days

The USD ICE BYI is calculated for designated Benchmark Days. Benchmark Days are days which are not Saturdays, Sundays, nor market holidays in either London or New York<sup>1</sup>.

The USD ICE BYI for a given Benchmark Day is calculated and published on the next Benchmark Day.

### Input Data

The USD ICE BYI is based on transaction data for a rolling 5-day collection window, which may be extended to additional days if necessary, to collect sufficient data.

The Index for a given Benchmark Day is based on transaction data for that day and at least 4 preceding Benchmark Days.

The input data required is a set of transactional data covering the collection window, consisting of:

- Primary market bank funding transactions sourced from designated data provider banks; and
- Secondary market transactions in the bank level debt obligations of a number of large banking groups, sourced from the Financial Industry Regulatory Authority's™ (FINRA™) Trade Reporting and Compliance Engine™ (TRACE™). The list of instruments included is reviewed regularly by IBA.

### Validation and normalization

Funding transactions are subject to eligibility criteria, including: minimum transaction size of USD 10 million; a maturity range of 7-500 calendar days; product type in allowed list; counterparty type in allowed list; maturity for transactions with counterparty type "corporate" must be over 35 days; funding location in allowed list; start date no later than spot.

Funding transactions from the same bank, with the same key parameters, are aggregated before calculation. This accounts for the possibility larger transactions being split and avoids multiple counting.

Bond transactions are subject to eligibility criteria, including: minimum transaction size of USD 5 million; minimum issuance size, at the date of the primary offering, of USD 500 million; fixed rate, semiannual coupon between 1% and 6%; maturity between 20 and 500 calendar days.

Bond transaction data is deduplicated, to account for multiple reporting of the same transactions in TRACE.

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<sup>1</sup> A list of applicable holidays is published on the IBA web site

Bond yields are converted to a money-market basis.

### **Data sufficiency thresholds**

In order to ensure that the Index is constructed from a sufficiently large and diverse data set, the Index methodology applies the following threshold tests to the input data collected across the five-day input data collection window:

- Minimum aggregate funding transaction volume of USD 15 billion across all eligible transactions;
- Minimum eligible transaction count of 100

If these thresholds are not reached, the collection window is extended, one day at a time, until the thresholds are met.

Further thresholds are applied to tenor buckets according to days to maturity:

- Up to 44 days: minimum 30 transactions;
- 45 - 119 days: minimum 30 transactions;
- 120 - 249 days: minimum 20 transactions; and
- 250 - 500 days: minimum 20 transactions.

If any of the tenor bucket thresholds is not reached, the collection window for that tenor bucket is extended, one day at a time, until the thresholds are met.

If any thresholds are still not met after extending the window to the maximum period of 10 days, then the Insufficient Data Policy will apply.

### **Transaction weighting**

All transactions are initially equally weighted, regardless of transaction size.

A maximum weight threshold (currently 10%) of the total weight of bond transactions is calculated. If any bond issuer's total weight exceeds this threshold, their transaction weights are reduced proportionately.

Similarly, a maximum weight threshold (currently 15%) of the total weight of funding transactions is calculated. If any funding data provider's total weight exceeds this threshold, their transaction weights are reduced proportionately.

### **Curve fitting**

The set of validated and normalized transactions will be used to fit a yield curve using a robust regression algorithm targeting a third-order polynomial. The curve fit is based on time to maturity, yield and transaction weighting. Maturities of under 14 calendar days are converted to business days for the curve fitting.

An outlier filter will identify any data points farther than the outlier threshold (currently 200 basis points) from the fitted curve.

If any transactions have been identified as outliers, then the outliers are removed from the set of transactions and the robust regression is recalculated.

### **Rate determination and publication**

USD ICE Bank Yield Index values are determined for 1M, 3M, 6M and 12M tenors, from the curve values at 30, 91, 182 and 365 days to maturity respectively.