



U.S. Dollar ICE Bank Yield Index Update

May 2020



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Executive Summary

Background to the Index

ICE Benchmark Administration Limited (IBA), a leading provider of global interest rate and other financial benchmarks, introduced the U.S. Dollar ICE Bank Yield Index (the Index) in a [white paper](#) in January 2019. IBA has since published three updates to the white paper in [April](#), [July](#) and [October](#) 2019, in order to update market participants on the details of the proposed Index methodology as it has evolved, to provide testing results, and to seek feedback on the Index.

The U.S. Dollar ICE Bank Yield Index is designed to be a forward-looking, credit-sensitive benchmark and has been developed specifically as a potential replacement for LIBOR for U.S. dollar lending activity.

The Index will measure the average yields at which investors are willing to invest unsecured U.S. dollar funds over one-month, three-month and six-month periods on a wholesale, senior, unsecured basis in large, internationally active banks. The Index will be based entirely on unsecured transactions in the obligations of banks and uses two types of fully-transactional input data representing wholesale, unsecured bank investment yields:

- Primary market funding transactions; and
- Secondary market bond transactions.

Importantly, there will be no requirement for data contributors to use expert judgement when providing input data.

Cash-market participants have informed IBA that they value many of the key attributes that the U.S. Dollar ICE Bank Yield Index shares with U.S. dollar LIBOR, including:

- Forward-looking term settings;
- Credit sensitivity; and
- An average unsecured bank rate across a collection of internationally active banks.

Progress to Date and Testing Results

Since the publication of the original white paper, IBA has evolved the proposed Index methodology in order to optimize a large and robust data set that is reflective of conditions in the money markets. This is achieved by using data collected during a rolling five-day transaction window, subject to certain minimum volume and transaction thresholds. Further details can be found in the *Methodology Updates* section of this update.

Feedback received also suggested that IBA should further develop the methodology in order to build the Index as a credit-spread supplement to SOFR rates. This is because SOFR is the alternative risk free rate for U.S. dollar LIBOR selected by the [Alternative Reference Rates Committee](#) (ARRC) in the United States, and it was thought this construction might aid the markets in their transition away from U.S. dollar LIBOR.

IBA has since developed the means to produce the Index in this manner and is ready to do so if and when the ARRC has communicated with market participants that it is an appropriate time to pursue the construction and use of term SOFR rates, which would be necessary to support the credit spread supplement.

IBA has been testing the Index since December 2017, and results through to the end of April 2020 can be found in the *Testing Results* section of this update and on the [IBA website](#). This update also contains observations regarding the performance of the Index obtained during the COVID-19 pandemic, which can be found in the section entitled *ICE Bank Yield Index observations during the COVID-19 Pandemic*.



Next Steps

Over the coming months, IBA intends to:

- Monitor developments in the transition from U.S. Dollar LIBOR and engage with members of the official sector to assess the Index's ability to meet the needs of the cash markets;
- Work with large, internationally active banks to obtain agreements to provide primary market funding data on an on-going basis to calculate the Index;
- Establish the governance and control framework for the production of the Index;
- Establish an operational framework to produce the Index in the United States;
- Ensure that the Index can be used by supervised entities in the EU; and
- Seek external assurance regarding the Index's compliance with the IOSCO Principles for Financial Benchmarks.

Subject to the above, IBA is seeking to launch the U.S. Dollar ICE Bank Yield Index for use by market participants in the latter part of 2020. IBA will keep market participants informed of its progress in respect of the Index.

Please note that the timings associated with producing the Index could be materially impacted by the COVID-19 pandemic and stakeholders' abilities to engage with IBA on the development of the Index, in particular the banks whose data is necessary to determine the Index.

There is no guarantee that IBA will continue to test the U.S. dollar ICE Bank Yield Index, be able to source data to derive the Index or publish the Index in the future. Users of LIBOR should not rely on the potential publication of the U.S. Dollar ICE Bank Yield Index when developing and executing transition or fallback plans.



Methodology Updates

Background

The U.S. Dollar ICE Bank Yield Index, as described in detail in the original white paper and the subsequent updates¹, is designed to measure the average yields at which investors are willing to invest U.S. dollar funds over one-month, three-month and six-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 (for example, SOFR);
- 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-risk over the various forward-looking time horizons.

Methodology Updates

The third update, published in October 2019, introduced a revised preliminary methodology designed to broaden the input data set used to derive the Index. The revised methodology utilized a rolling five-day average of unsecured bank funding and bond transaction yields (subject to minimum transaction volume and transaction count thresholds), and modified the data collection window to start and end at midnight Eastern Time. IBA has continued to test this version of the methodology, with the following refinements:

- Removal of the market data adjustment for previous days' transactions. This adjustment was intended to reduce the influence of short-term movements on the term rate. However, since any such rate could not be reliably sourced at the same moment as each input transaction, and rates such as OIS may move significantly intraday, IBA considered that this adjustment could serve to distort the rate;
- Changes to the handling of non-business days, including not publishing the Index on a day which is either a UK or a US holiday;
- Updating the list of eligible bank bond issuers and eligible bank bonds;
- Including primary market funding transaction data from an additional large, internationally active bank;
- Introducing an outlier exclusion step with a wide threshold of 200bps from the curve; and
- Utilizing maturity-bucket thresholds with the ability to source data over a longer collection period if certain transaction count thresholds are not reached.

In order to calculate the Index based on a rolling five-day average of transaction yields, the key inputs required are underlying transaction data over the input data collection window that are representative of the yields available to investors in both the primary funding and the secondary bond markets for senior, wholesale, unsecured U.S. dollar bank debt obligations. The updated preliminary Index methodology uses:

- Primary market bank funding transactions sourced from 14 of the 16 U.S. dollar LIBOR Panel Banks², which are subject to eligibility criteria including a minimum transaction size of USD 10 million and allowable values for counterparty type, product type, maturity and funding location³; and
- Secondary market transactions in the bank-level debt obligations of 31 large banking groups, sourced from the Financial Industry Regulatory Authority's™ (FINRA™) Trade Reporting and Compliance Engine™ (TRACE™)⁴, which are subject to eligibility criteria including a minimum transaction size of USD 5 million, a minimum issuance size of USD 500 million and allowable values for bond type, coupon range and maturity

¹ IBA published the original [white paper](#) in January 2019, with updates in [April 2019](#), in [July 2019](#) and in [October 2019](#).

² 14 of the 16 U.S. dollar LIBOR panel banks have consented to IBA using their funding transaction data for the purposes of testing the Index.

³ See Appendix A of the Term Sheet attached as Appendix 1 to the [January 2019 White Paper](#).

⁴ Financial Industry Regulatory Authority, FINRA, Trade Reporting and Compliance Engine, and TRACE are trademarks of Financial Industry Regulatory Authority, Inc. (FINRA), in the US and/or other countries. All rights reserved. See <http://www.finra.org/industry/trace> for further details regarding TRACE. The U.S. Dollar ICE Bank Yield Index is not associated with, or endorsed or sponsored by, FINRA.



range⁵. Bond transaction volumes are weighted to ensure that no issuer represents over 10% of the bond transactions used in the Index calculation, and bond yields are adjusted to represent yield on a money-market basis.

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 each given five-day input data collection window:

- A minimum aggregate funding transaction volume of USD 15 billion across all eligible transactions;
- A minimum eligible transaction count of 100; and
- A minimum eligible transaction count for each of the following tenor buckets:
 - 5 - 44 days to maturity: minimum 30 transactions;
 - 45 - 119 days to maturity: minimum 30 transactions;
 - 120 - 249 days to maturity: minimum 20 transactions; and
 - 250 - 500 days to maturity: minimum 20 transactions.

If these thresholds are not reached, the methodology will source data over a longer collection period than the target five days. For example, if the USD 15 billion minimum aggregate volume threshold is not achieved over five days, then transaction data from earlier days will be used until the minimum volume threshold is met (i.e. by looking-back to six, seven, eight days etc.). For the tenor bucket threshold tests, which are applied last, additional earlier days will only be used for those tenor buckets for which the threshold is not achieved.

A weighted robust regression process will then fit a yield curve to the transaction data points (as adjusted, where applicable) obtained from the relevant input data collection window. At this point, an outlier filter will identify any data points farther than an outlier threshold (200bp) from the fitted curve. If any transactions are identified as outliers, then the robust regression will be recalculated excluding these data points⁶. The resulting yield curve can then be used to produce settings that are representative of the average yields at which investors are willing to invest U.S. dollar funds on a senior, unsecured basis in large, internationally active banks for set time horizons (e.g. one, three and six months).

⁵ See Appendix C of the [January 2019 White Paper](#). Please note that the minimum size for bond transactions to be included in the Index has since been increased to USD 5 million.

⁶ The robust regression process is designed to minimize the influence of outlier data points. The additional outlier exclusion step has a wide threshold and is intended to remove only clearly erroneous and unrepresentative transaction reports.

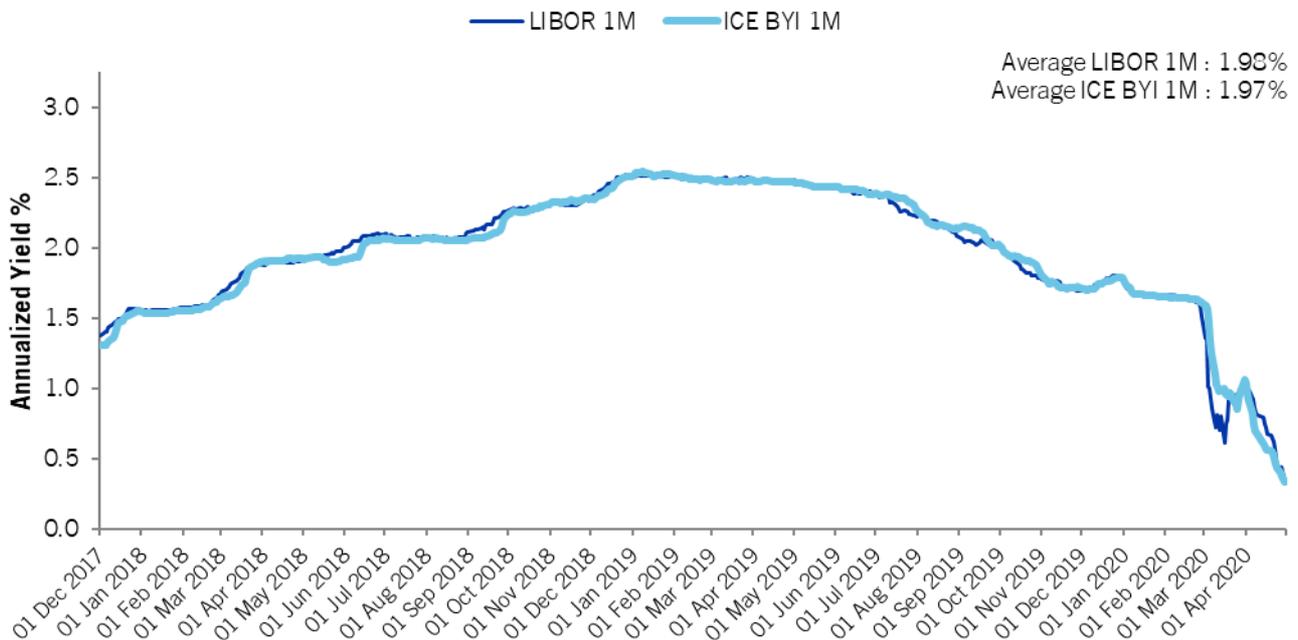


Testing Results

Since the previous update in [October 2019](#), IBA has continued to calculate the U.S. Dollar ICE Bank Yield Index. Results for the entire testing period from December 1, 2017, to April 30, 2020, have been recalculated using the refined preliminary Index methodology described in this update.

Line charts showing one-month, three-month and six-month settings for the U.S. Dollar ICE Bank Yield Index during the test period are shown below, together with the corresponding U.S. dollar LIBOR settings for the same period⁷. The results are also available in CSV format on [IBA's website](#).

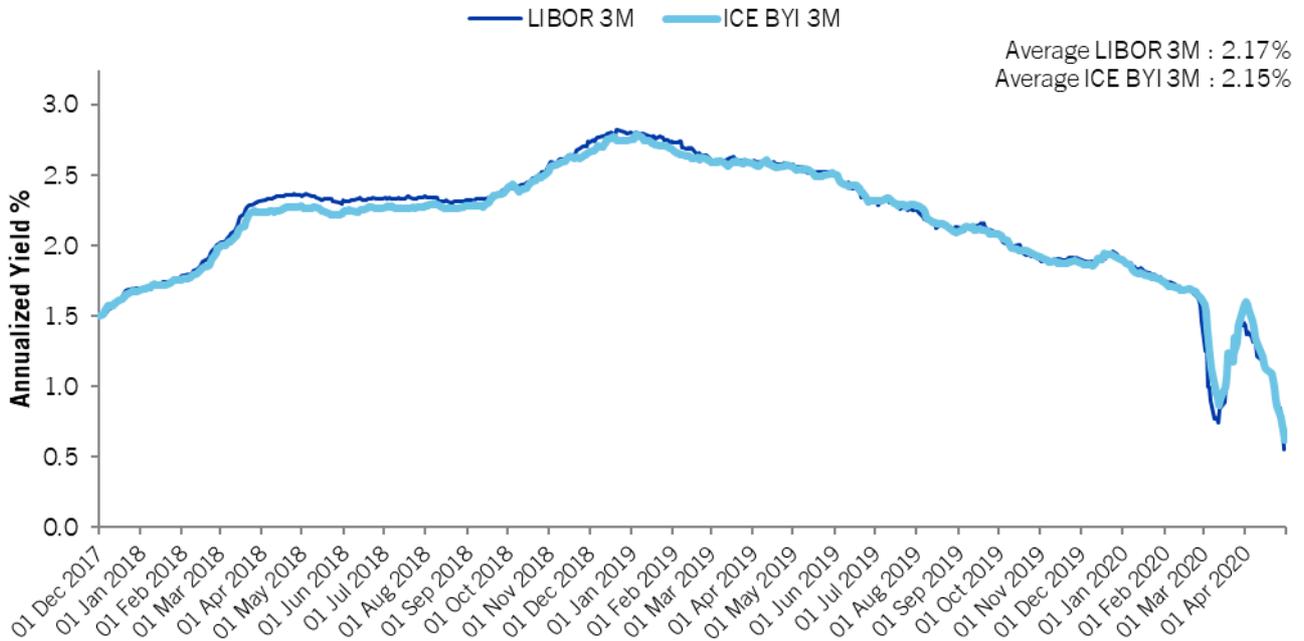
USD ICE Bank Yield Index : 1M



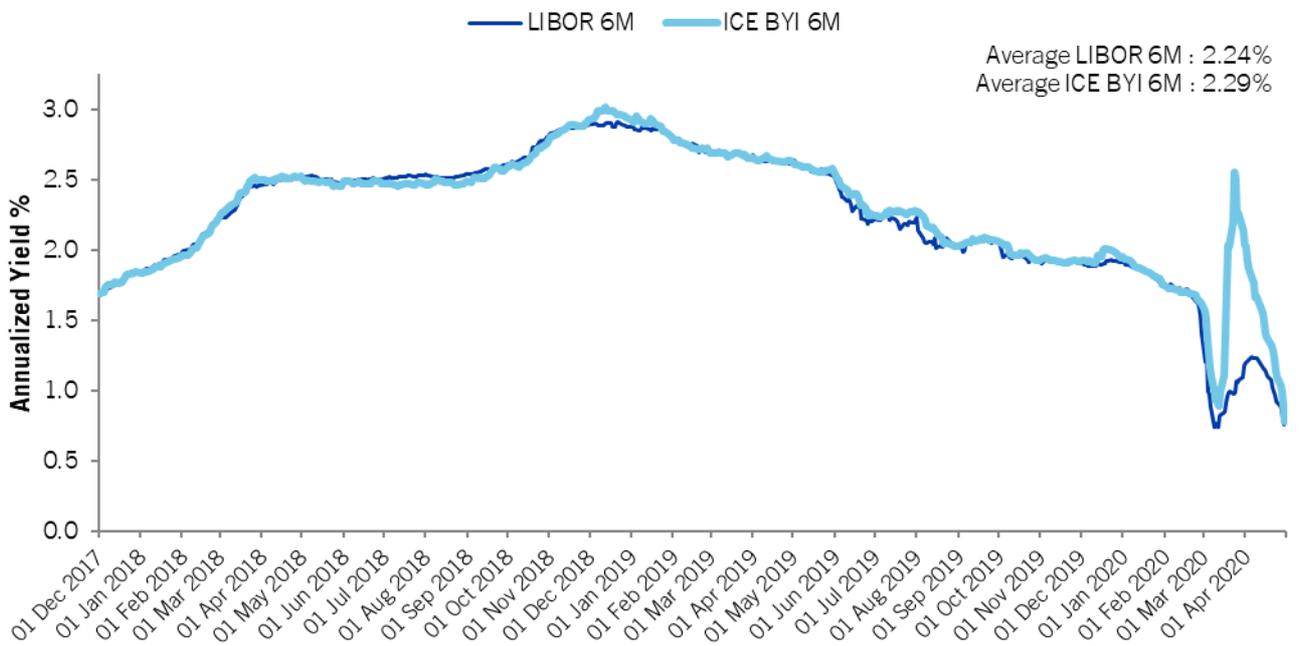
⁷ Note that U.S. dollar LIBOR and the U.S. Dollar ICE Bank Yield Index are produced using different methodologies and different data sources. As a result, care should be taken when comparing U.S. dollar LIBOR and the U.S. Dollar ICE Bank Yield Index on any day or for any period, including the period of testing.



USD ICE Bank Yield Index : 3M



USD ICE Bank Yield Index : 6M



The movement of rates during March 2020, in particularly in the six-month tenor, is discussed further in the next section of this update, entitled *ICE Bank Yield Index observations during the COVID-19 Pandemic*.

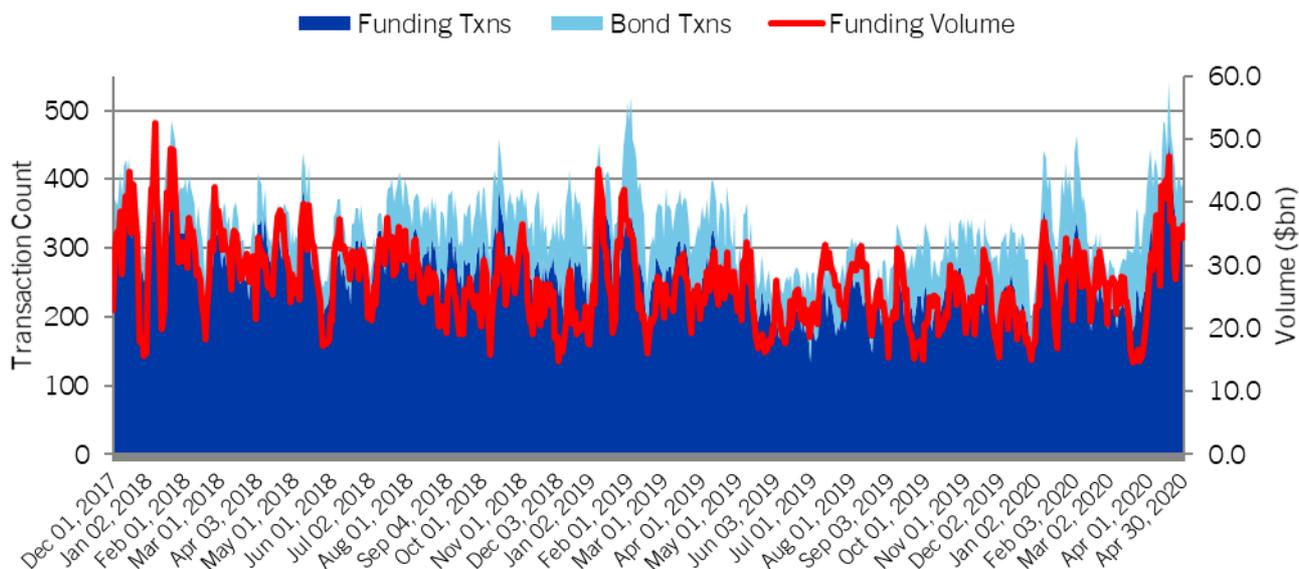
The daily count of bond and funding input data transactions, and the total volume of funding transactions, in each case used to calculate the Index in accordance with the updated preliminary methodology during the testing period, are shown below.



In the 592 business days from December 1, 2017, to April 30, 2020:

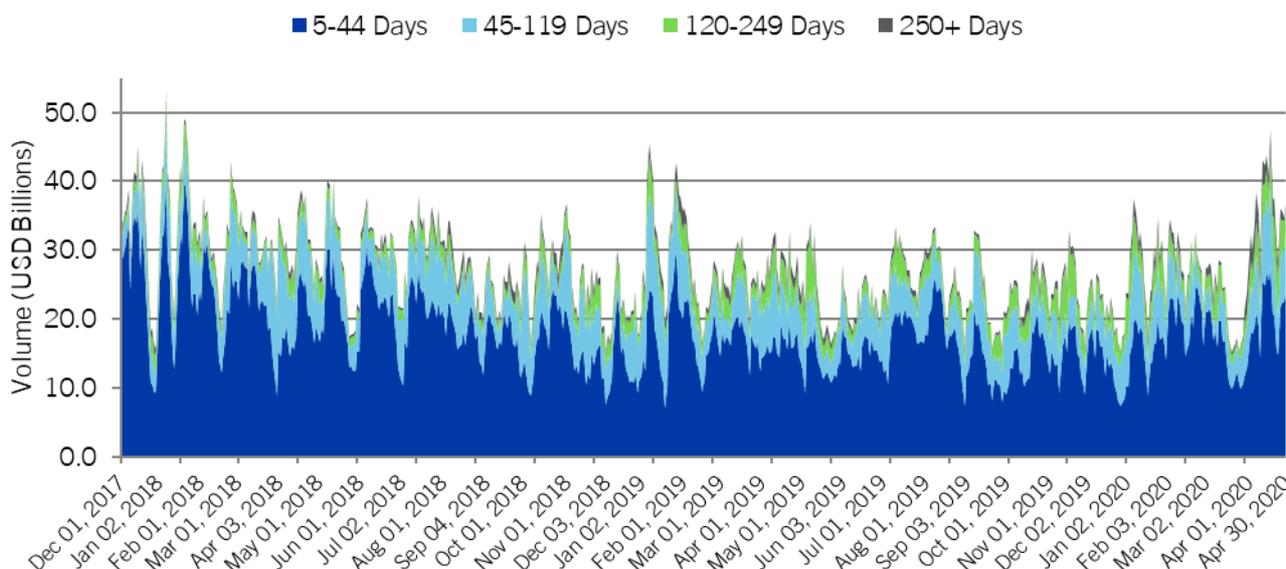
- 577 calculations used 5 days' data;
- 14 calculations used 6 days' data; and
- 1 calculation used 7 days' data.

USD ICE BYI Count and Volume of Transactions Used per Day



The daily volumes of input data transactions for each tenor bucket used to calculate the Index in accordance with the updated preliminary methodology during the testing period are shown below.

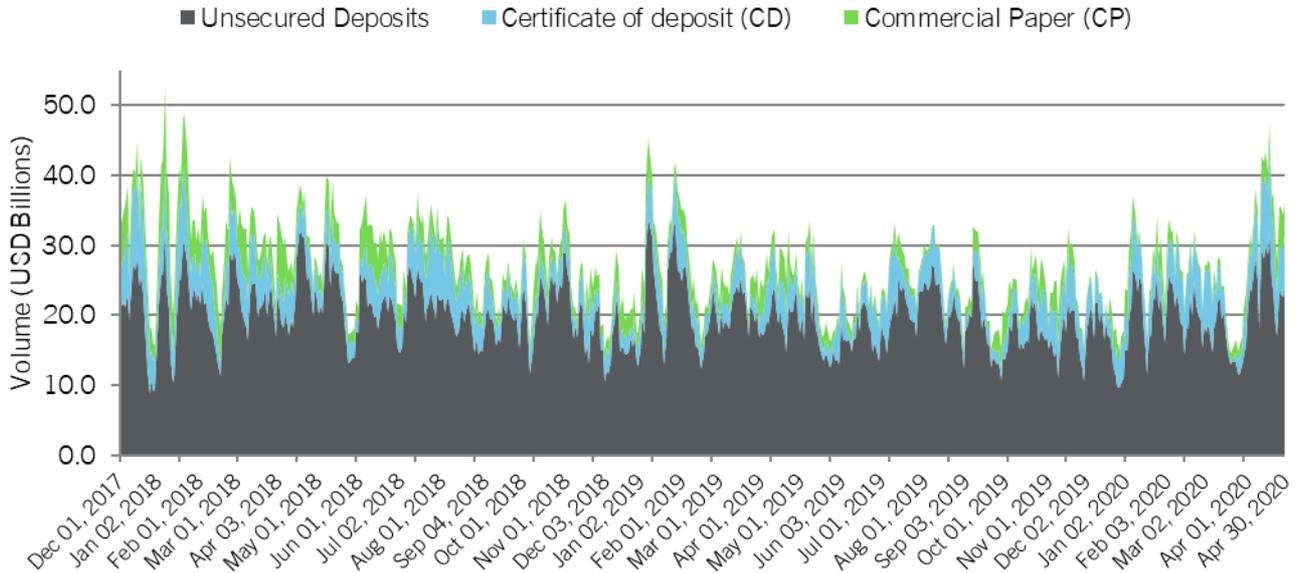
USD ICE BYI Daily Volume of Transactions Used by Maturity



The daily volumes of input data funding transactions for each funding transaction product type used to calculate the Index in accordance with the updated preliminary methodology during the testing period are shown below.

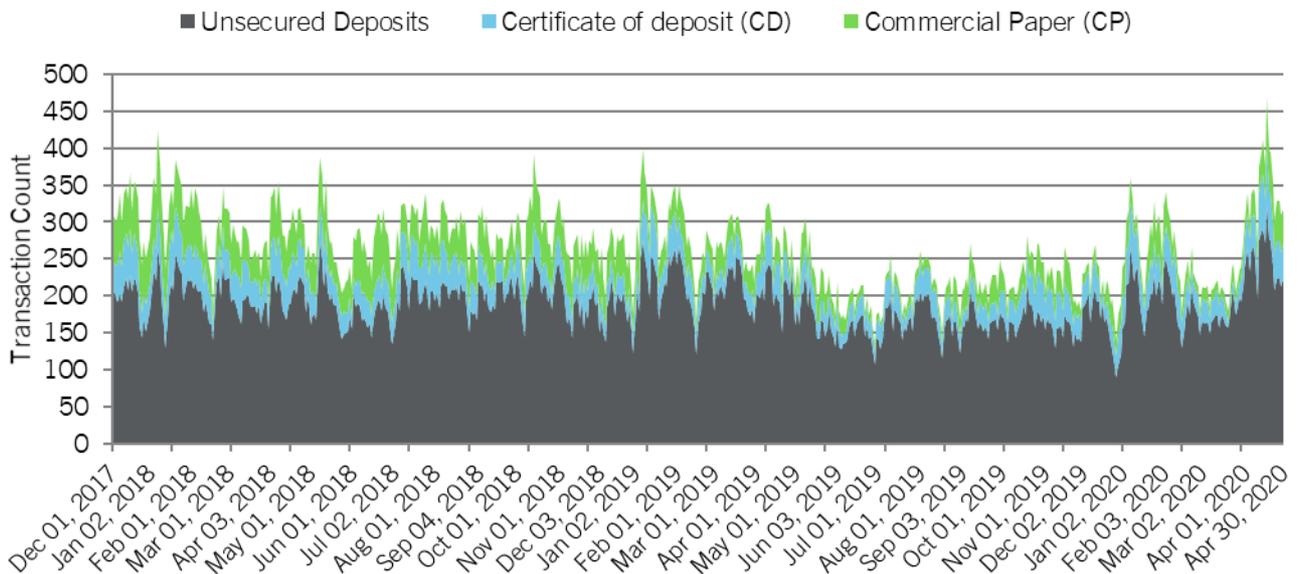


USD ICE BYI Daily Volume of Funding Transactions Used by Product



The daily counts of input data funding transactions for each funding transaction product type used to calculate the Index in accordance with the updated preliminary methodology during the testing period are shown below.

USD ICE BYI Daily Count of Funding Transactions Used by Product





ICE Bank Yield Index observations during the COVID-19 Pandemic

The recent stressed markets caused by the COVID-19 pandemic have seen bond transactions exhibit a very wide range of prices, which have generally been at higher yields than funding transactions.

As highlighted in the table below, in January and February 2020, unsecured primary market funding yields and secondary market bond yields tended to be more closely aligned. This relationship started to deviate in March, most notably in bond transactions in longer tenors, which exhibited increased yields. Bond transaction and funding transaction yields began to converge from the last week of March.

	5-44 Days				45-119 Days				120-249 Days				250-500 Days			
	BOND		FUNDING		BOND		FUNDING		BOND		FUNDING		BOND		FUNDING	
	Txns	Yield	Txns	Yield	Txns	Yield	Txns	Yield	Txns	Yield	Txns	Yield	Txns	Yield	Txns	Yield
Jan-20	1	1.80 %	141	1.63 %	7	1.80 %	86	1.82 %	7	1.82 %	38	1.83 %	68	1.80 %	17	1.86 %
Feb-20	5	1.69 %	149	1.61 %	5	1.74 %	64	1.70 %	11	1.67 %	30	1.68 %	62	1.66 %	7	1.67 %
Mar-20	1	1.68 %	138	1.08 %	13	2.71 %	50	1.15 %	18	2.43 %	20	1.07 %	52	2.42 %	7	0.87 %
Apr-20	3	1.20 %	178	0.41 %	10	1.75 %	99	1.06 %	20	1.61 %	38	1.11 %	41	1.70 %	17	1.13 %

Key: **Txns:** Average Transaction Count used in Index calculations for the period.
Yield: Average Daily Average Yield for the period (%).

Observations by Index tenor:

- The one-month and three-month tenors, where there are comparatively few bond transactions, continue to trend closely with the corresponding U.S. dollar LIBOR settings; and
- The six-month tenor, which is more influenced by the higher bond yields as mentioned above, saw increases relative to the corresponding U.S. dollar LIBOR setting during the middle part of March. However, these rates began to converge again towards the end of the month and have continued to converge in recent weeks.

In addition, during the January to April 2020 testing period, there were two material reductions in target interest rates by the Federal Reserve, both following unscheduled emergency Federal Open Market Committee (FOMC) meetings⁸. U.S. dollar LIBOR, as calculated using the current “Waterfall” panel bank submission methodology, reacted quickly to these policy rate moves. In contrast, the Index, which uses a rolling five-day average of data inputs, exhibited a slight delay in responding to this activity relative to LIBOR, as the transaction data following the policy rate reductions began to flow into the Index calculation.

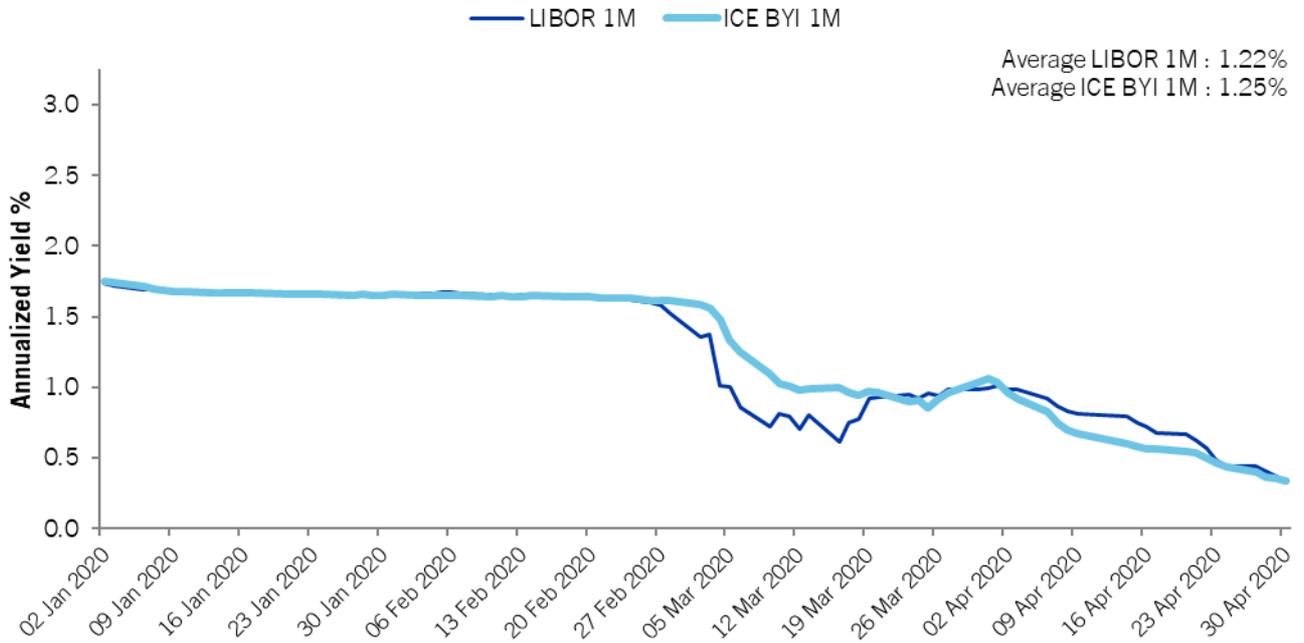
Transaction counts and volumes for the Index input data have remained reasonably stable during the COVID-19 pandemic. In the latter part of March, volumes were slightly lower on average than in previous periods but still sufficient to calculate the Index with minimal requirements to use additional days’ data (beyond the standard five-day window) to meet the volume thresholds. Volumes increased markedly in April.

Line charts for the one-month, three-month and six-month settings for the Index during January to the end of April 2020, are shown below, together with the corresponding U.S. dollar LIBOR settings for the same period.

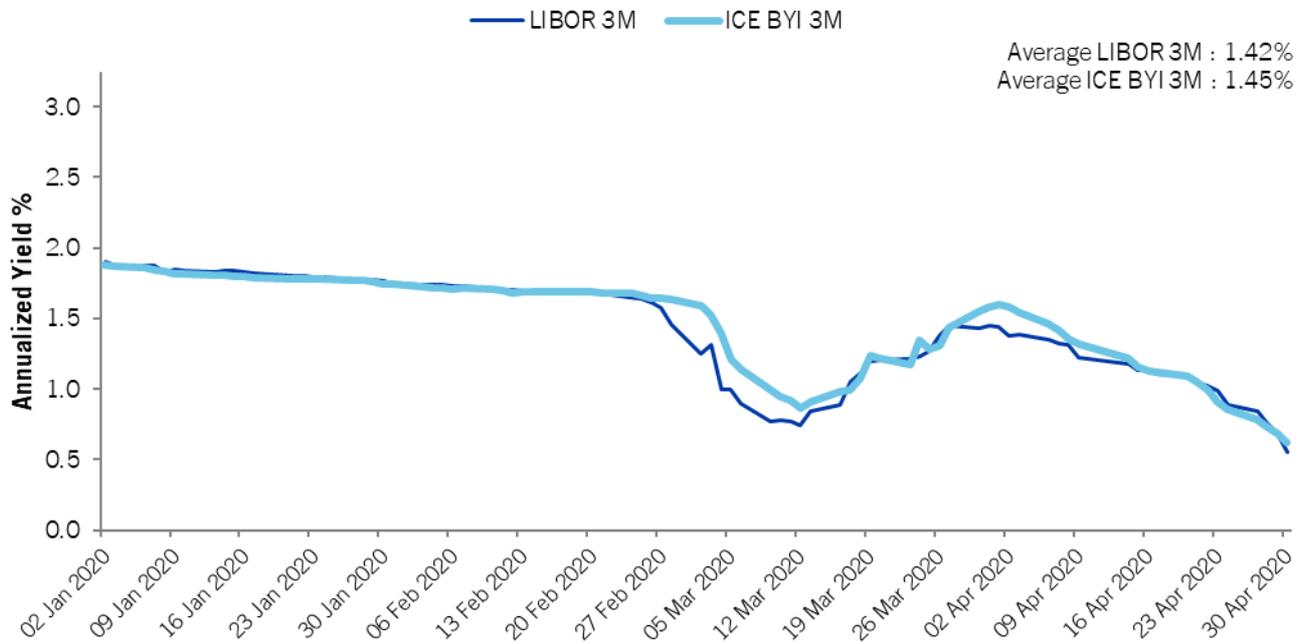
⁸ The FOMC held unscheduled meetings on March 3, 2020, and March 15, 2020:
<https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm>.



USD ICE Bank Yield Index : 1M

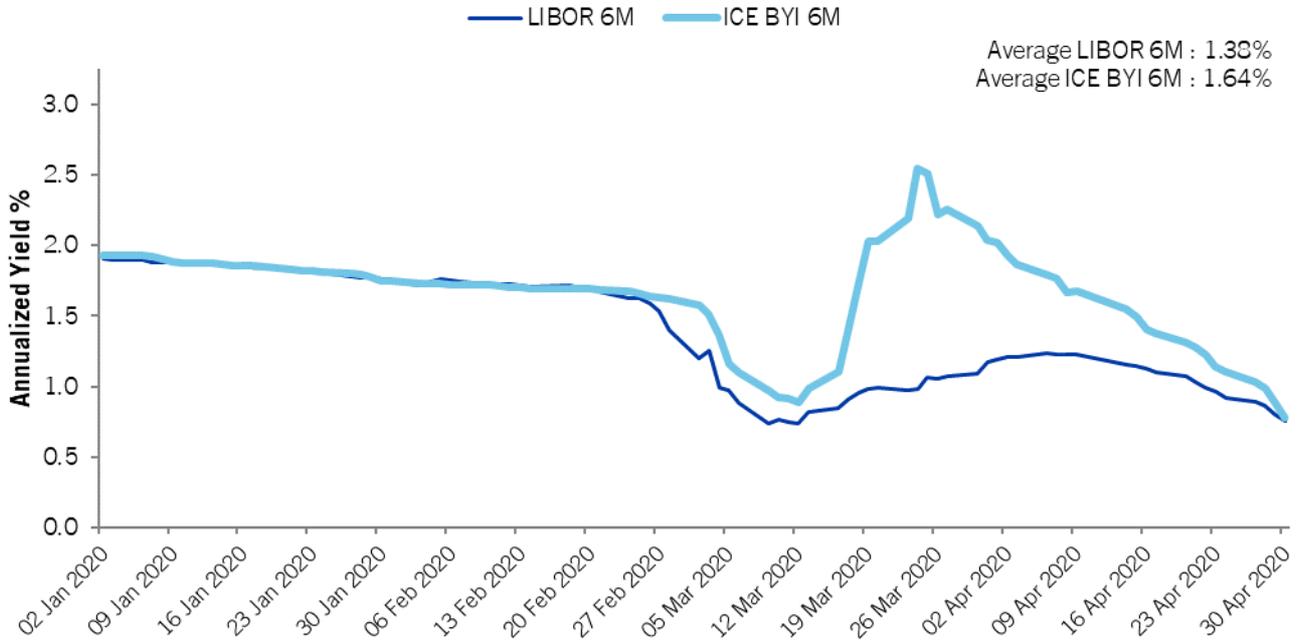


USD ICE Bank Yield Index : 3M





USD ICE Bank Yield Index : 6M

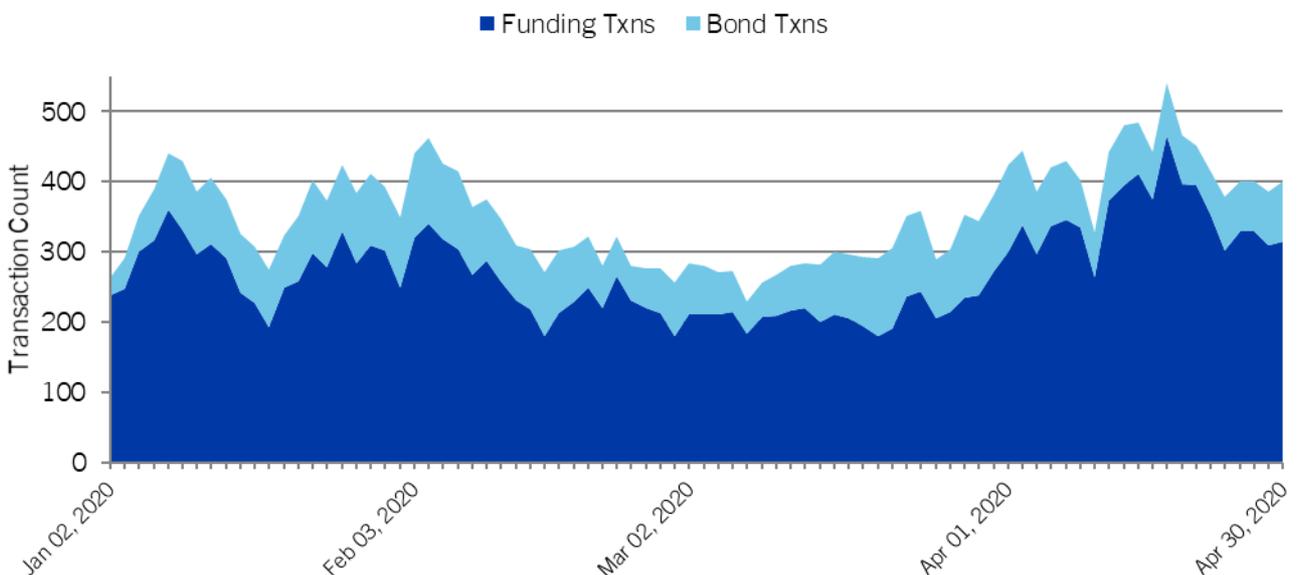


The daily count of bond and funding input data transactions, and the volume of funding transactions (together with the number of days from which input data was required), in each case used to calculate the Index in accordance with the updated preliminary methodology during January to April 2020, are shown in the two charts below.

In the 82 business days from January 2, 2020 to April 30, 2020:

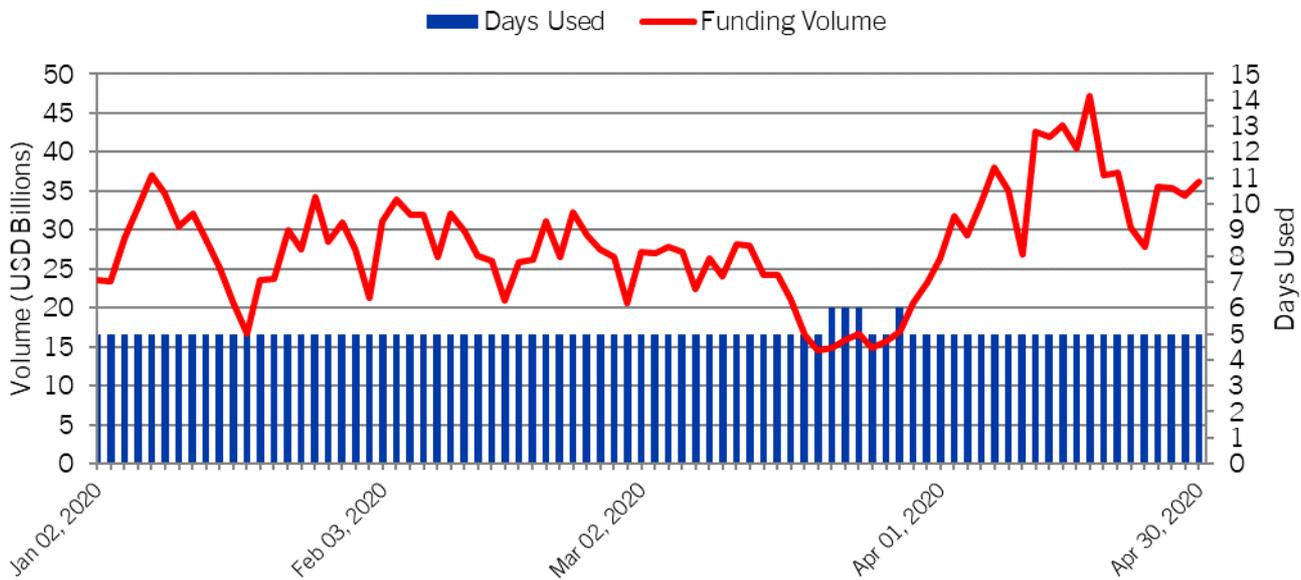
- 78 calculations used 5 days' data; and
- 4 calculations used 6 days' data.

USD ICE BYI Count of Transactions Used per Day, Jan-Apr 2020





USD ICE BYI Volume of Transactions Used and Days Used, Jan-Apr 2020





Next Steps and Feedback

IBA welcomes further feedback from all market participants and stakeholders on all aspects of the U.S. Dollar ICE Bank Yield Index and its methodology, especially from cash market participants which use U.S. dollar LIBOR in their financial contracts.

Please contact IBA at IBA@theice.com to provide any feedback on the Index, to arrange a discussion on any of the Index proposals with IBA, or to be included in a distribution list for progress updates on the potential launch of the Index.

Provided that the outcome of testing continues to be satisfactory, IBA plans to follow the following steps to prepare for the potential launch of the Index:

- Monitor developments in the transition away from U.S. dollar LIBOR and engage with members of the official sector to assess the Index's ability to meet the needs of the cash markets and to help facilitate the transition from LIBOR;
- Work with large, internationally active banks, with a view to entering into agreements to provide IBA with the primary market funding data required to generate the Index;
- Establish the governance and control framework for the production of the Index, which will include the following elements:
 - Appointment of an oversight committee with responsibility to oversee the methodology and administration of the Index;
 - Adaptation of IBA's control and accountability frameworks to include the Index;
 - Adaptation of IBA's suite of surveillance tools and other capabilities for the effective monitoring of the Index and the input data;
 - Production of documentation relevant to the Index, including a procedure to address the treatment of any input data errors and a policy to cover any instances in which there may be insufficient input data in order to calculate the Index using the standard methodology; and
 - A code of conduct concerning the provision of input data by the proposed banks;
- Establish an operational framework to produce the Index in the United States on an ongoing basis;
- Ensure, in the context of the EU Benchmarks Regulation (BMR), that the Index can be used by supervised entities in the EU; and
- Seek external assurance regarding the Index's compliance with the IOSCO Principles for Financial Benchmarks.

Whilst IBA is seeking to launch the Index in the second half of 2020, this is contingent on reaching an agreement with a sufficient number of banks to provide primary market funding data required to produce the Index. It must be emphasized that the continuing COVID-19 pandemic and its impact on the global financial system poses risks to IBA's proposed timescales and stakeholders' abilities to engage with IBA on the development of the Index, in particular the banks whose data is necessary to determine the Index.

It should be noted that there is no guarantee that IBA will continue to test the U.S. Dollar ICE Bank Yield Index, be able to source data to derive the Index or publish the Index in the future. Users of LIBOR should not rely on the potential publication of the Index when developing and executing transition or fallback plans.



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⁹ IBA published updates to the white paper in [April 2019](#), [July 2019](#) and [October 2019](#).



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