



## AMERIBOR® Index Series Methodology

The American Interbank Offered Rate (“AMERIBOR®”) Index Series consists of:

- AMERIBOR® (ticker: AMERIBOR)
- AMERIBOR® 30-Day Rolling Average (ticker: AMBOR30)
- AMERIBOR® 90-Day Rolling Average (ticker: AMBOR90)
- AMERIBOR® Term-30 (ticker: AMBOR30T)
- AMERIBOR® Term-90 (ticker: AMBOR90T)

AMERIBOR is based on overnight unsecured loan transactions on the American Financial Exchange, LLC (“AFX”)<sup>1</sup>, an electronic platform founded and launched in 2015 and which is now a business unit of an affiliated company, Creditex Group, Inc. AMERIBOR Term-30 and AMERIBOR Term-90 indices (the “Term Indices”) track term rates derived from commercial paper and commercial certificate of deposit transactions from American financial institutions (in addition to AMERIBOR for AMERIBOR Term-30).

The AMERIBOR® Index Series is calculated after the close of trading on the AFX and is published nightly on the ICE Global Index Feed and the ICE Index Platform at approximately 7:00 PM Eastern Time each business day (“Business Day”), defined as any day not designated as an observed holiday by the U.S. Federal Reserve System (K.8)<sup>2</sup>. The AMERIBOR Index Series is published as annual percentage rates, and all inputs to the indices use an Actual/360 Day Count convention, meaning the calculation of interest accrual is based on the actual number of calendar days, but assumes a 360-day year. In addition, all indices in the AMERIBOR Index Series assume a Following Business Day convention, meaning that if any payment date, term date, etc., should fall on a non-Business Day, then the following Business Day is used.

### Overnight Indices

AMERIBOR (ticker symbol AMERIBOR) is designed to track the borrowing costs of small, medium, and regional banks in the United States. AMERIBOR is calculated as the volume weighted average interest rate of the daily fully-funded transactions in the AMERIBOR overnight unsecured loan market on AFX. AMERIBOR is published rounded to the fifth decimal place.

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<sup>1</sup> <https://www.ice.com/fixed-income-data-services/fixed-income/ice-bonds/afx>

<sup>2</sup> <https://www.federalreserve.gov/aboutthefed/k8.htm>

AMBOR30 and AMBOR90 are simple 30- and 90-calendar day trailing averages of AMERIBOR, respectively. For any holiday or weekend dates for which AMERIBOR is not published, the previous value of AMERIBOR is used for that calendar day in the calculation of the indices.

## Term Indices

### AMERIBOR® Term-30 (ticker symbol AMBOR30T)

AMERIBOR® Term-30 is designed to track the wholesale funding cost for American financial institutions over a thirty-day period for the calculation date. The index is calculated using AMERIBOR as well as a broad data set of primary issuances of wholesale commercial deposits and commercial paper of U.S.-domiciled financial institutions of every size.

The transactions data used in the calculation of AMERIBOR Term-30 is the overnight AMERIBOR along with qualifying commercial paper (CP) and commercial certificate of deposit (CD) issuances selected from a dataset published daily by the Depository Trust & Clearing Corporation (DTCC)<sup>3</sup>, a registered clearing agent regulated by the U.S. Securities and Exchange Commission.

Eligible transactions must satisfy all of the following criteria: (i) pay a fixed interest rate; (ii) be at least \$1 million principal in size; (iii) be issued and settled on the same day; (iv) have a term between 2 and 40 days, inclusive; (v) be issued by a U.S. domiciled financial company; (vi) if CP, must be issued by an entity with a short-term investment grade rating by one of either Moody's, S&P or Fitch; (vii) is within 250 basis points of the previous day's AMBOR30T.

The transactions data includes all eligible transactions reported over the past five Business Days. If a minimum volume threshold of \$25 billion is not met, additional Business Days are included until the threshold is met, up to a maximum ten-day lookback window. If the ten-day lookback window does not result in sufficient transaction volume to reach the \$25 billion minimum volume threshold, the prior day's AMERIBOR Term-30 rate is carried over.

Each eligible transaction's interest rate is factor-weighted, where the factor value is the principal multiplied by the days to maturity. The combined sum of these weighted interest rates divided by the sum total of the factor values is the AMERIBOR Term-30 rate.

To more formally express the calculation, let  $N$  denote the total number of such transactions, and label each transaction  $T_i$  for  $i \in \{1, 2, \dots, N\}$ . Then, let  $D(\cdot)$  map a transaction  $T_i$  to its term (days to maturity), and similarly let  $P(\cdot)$  map to principal amount and  $R(\cdot)$  to interest rate, where interest rate is Actual/360. As a result, we can express the calculation as:

$$AMBOR30T = \frac{\sum_{i=1}^N D(T_i)P(T_i)R(T_i)}{\sum_{i=1}^N D(T_i)P(T_i)}$$

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<sup>3</sup> <https://www.dtcc.com/data-services/market-aggregates-and-analytics/money-market-kinetics>

## **AMERIBOR® Term-90 (ticker symbol AMBOR90T)**

AMERIBOR® Term-90 is designed to track the wholesale funding cost for American financial institutions over a ninety-day period for the calculation date. The index is calculated using a broad data set of primary issuances of wholesale commercial certificates of deposit and commercial paper of U.S.-domiciled financial institutions of every size.

The transactions data used in the calculation of AMERIBOR Term-90 is qualifying commercial paper (CP) and certificates of deposit (CD) issuances are selected from a dataset published daily by the Depository Trust & Clearing Corporation (DTCC), a registered clearing agent regulated by the U.S. Securities and Exchange Commission.

Eligible transactions must satisfy all of the following criteria: (i) pay a fixed interest rate; (ii) be at least \$1 million principal in size; (iii) be issued and settled on the same day; (iv) have a term between 41 and 120 days, inclusive; (v) be issued by a U.S. domiciled financial company; (vi) if CP, must be issued by an entity with a short-term investment grade rating by one of either Moody's, S&P or Fitch; (vii) is within 250 basis points of the previous day's AMBOR90T.

The transactions data includes all eligible transactions reported over the past five Business Days. If a minimum volume threshold of \$10 billion is not met, additional Business Days are included until the threshold is met, up to a maximum ten-day lookback window. If the ten-day lookback window does not result in sufficient transaction volume to reach the \$10 billion minimum volume threshold, the prior day's AMERIBOR Term-90 rate is carried over.

Each eligible transaction's interest rate is factor-weighted, where the factor value is the principal multiplied by the days to maturity. The combined sum of these weighted interest rates divided by the sum total of the factor values is the AMERIBOR Term-90 rate.

To more formally express the calculation, let  $N$  denote the total number of such transactions, and label each transaction  $T_i$  for  $i \in \{1, 2, \dots, N\}$ . Then, let  $D(\cdot)$  map a transaction  $T_i$  to its term (days to maturity), and similarly let  $P(\cdot)$  map to principal amount and  $R(\cdot)$  to interest rate. As a result, we can express the calculation as:

$$AMBOR90T = \frac{\sum_{i=1}^N D(T_i)P(T_i)R(T_i)}{\sum_{i=1}^N D(T_i)P(T_i)}$$

## **Index Sponsor & Administrator**

ICE Data Indices, LLC ("IDI") is the Index Sponsor and the Index Administrator. IDI is responsible for the day-to-day management of the AMERIBOR Index Series, including retaining primary responsibility for all aspects of the index determination process, including implementing appropriate governance and

oversight, as required under the International Organization of Securities Commission's Principles for Financial Benchmarks (the IOSCO Principles). The Credit Sensitive & Mortgage Rate Index Governance Committee is responsible for helping to ensure IDI's overall compliance with the IOSCO Principles, by performing the Oversight Function with respect to the AMERIBOR Index Series and other credit-sensitive interest rate and mortgage rate indices ("Rates Indices") which includes overseeing the development, design, issuance and operation of the Rates Indices, as well as reviewing the control framework. IDI is also responsible for decisions regarding the interpretation of these rules and the Credit Sensitive & Mortgage Rate Index Governance Committee is responsible for reviewing all rule book modifications with respect to the Rates Indices to ensure that they are made objectively, without bias, and in accordance with applicable law and regulation and IDI's policies and procedures. Consequently, all IDI's and the Credit Sensitive & Mortgage Rate Index Governance Committee discussions and decisions are confidential until released to the public.

AMERIBOR is not provided under IDI's status as a recognized third country benchmark administrator under the UK Benchmark Regulation (BMR)<sup>4</sup>, and therefore not subject to the Financial Conduct Authority's supervision.

### **Exceptional market conditions and corrections**

In the event IDI is prevented from accurately and reliably calculating one or more of the indices in the AMERIBOR Index Series due to circumstances such as a market-wide or industry specific events, or the quality or quantity of the data falls below the required standards in this methodology, IDI retains the right, whilst taking into account information and notifications provided by data sources, and exercising reasonable discretion and judgment (See also Expert Judgment below), to:

1. Use alternative data and information to calculate the index;
2. Extrapolate values from prior or related market information;
3. Delay or suspend the determination and publication of the indices; or
4. Cease production of the indices.

Market-wide or industry specific events include, but are not limited to, the following:

- Technological Problems/Failures;
- Natural Disaster or Other BCP-Related Event;
- Exceptional or disrupted market conditions.

In the event the data source is consistently falling below the required standards, alternative sources may be considered. Any such change shall be made in accordance with IDI's Consultation Policy. If no alternative, reliable sources can be found, IDI may consider ceasing production of the indices, which shall be done in accordance with IDI's Cessation Policy<sup>5</sup>.

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<sup>4</sup> <https://www.legislation.gov.uk/eur/2016/1011/contents>

<sup>5</sup> <https://www.ice.com/fixed-income-data-services/index-solutions/regulation>

Reasonable efforts are made to ensure the correctness and validity of data used in index calculations. Where errors have occurred in the determination or calculation of an index, the decision to make a restatement will be assessed on a case-by-case basis. Such decisions will take account of the significance, impact, age, and scale of the error. If a decision to restate has been made, index levels will be corrected, restated and clients notified.

IDI will communicate any issues with publication of the indices during the day through the regular client communication channels; in addition, IDI may also contact clients directly, post a notice on the IDI website, send a message via the market data portal, or use other such forms of communication.

### **Expert Judgment**

“Expert Judgment” refers to the exercise of discretion by an Administrator or Submitter with respect to the use of data in determining a Benchmark.

While IDI mostly relies on input data obtained from its sources, on certain occasions, such as in exceptional market conditions, where decisions relating to the calculation of a Benchmark are required to maintain the integrity of the values and ensure that the Benchmark continues to operate in line with the methodology, IDI may apply Expert Judgment. Where it is required in a Benchmark determination, it may only be applied by suitably experienced and qualified staff Members on the IDI team. Using their expertise and knowledge, and the information available to them, they will make an assessment of what input data would be most appropriate to use to correctly reflect the Benchmark objective. Ultimately any exercise of Expert Judgment for the Rates Indices is overseen by the Credit Sensitive & Mortgage Rate Index Governance Committee of IDI, which ensures that the published Methodologies have been followed.

All instances in which Expert Judgment is applied in the determination of a Benchmark, whether in terms of changes to the methodology or use of input data, are documented. Information on instances when Expert Judgment was used is available to users on request.

### **Periodic Review of Index Rules**

Rules and methodologies are reviewed periodically, in accordance with IDI’s policies and procedures, to ensure the indices in the AMERIBOR Index Series continue to meet their objective. The Index Administrator shall announce changes in Rules and methodologies, along with their implementation dates, in accordance with its policies and procedures. The Index Administrator will make material changes in accordance with IDI’s Consultation Policy, this may involve consulting on the proposed material changes that affect the Index prior to making such changes.

### **Rule book changes**

The Credit Sensitive & Mortgage Rate Index Governance Committee reviews rule book modifications and index changes for the Rates Indices to ensure that they are made objectively, without bias and in accordance with applicable law and regulation and IDI’s policies and procedures. These rules may be

supplemented, amended in whole or in part, revised or withdrawn at any time in accordance with applicable law and regulation and IDI applicable policies and procedures. Supplements, amendments, revisions and withdrawals may also lead to changes in the way the indices are compiled or calculated or affect the indices in another way.

## **Limitations**

The AMERIBOR Index Series relies on specific transaction data, including the use of commercial paper (“CP”) and certificates of deposit (“CD”). Low volumes with heterogeneous rates during normal conditions, and declining market liquidity during stressed market conditions may result in the data and the market not being sufficiently reliable or robust to support or maintain a representative index. The inherently small size of the underlying CP and CD market in relation to the potential volume of loans and transactions in AMERIBOR’s target market may compromise AMERIBOR’s ability to comply with benchmark design principles.

Should the sources of this data not make the information available, or if the underlying markets cease to function or there is a lack of liquidity, then it may not be possible to continue to calculate and publish the AMERIBOR Index Series in accordance with the methodology.

There is a risk that due to market conditions, exceptional market events or a persisting lack of liquidity, no loans or transactions take place in the lookback period prescribed in the methodology. Please refer to the Methodology’s description of “Exceptional market conditions and corrections” and “Expert Judgement” for details on how IDI would respond to such events.

In addition, changes in the economy, changes in regulation or accounting rules, changes in market share of the input data providers, consolidation in certain sectors or industries, or other factors could materially impact an index such that it is no longer representative of the market it is intended to measure in accordance with its objective.

## **ESG Disclosures**

The AMERIBOR Index Series does not take ESG factors into account.