LIBOR: What the London Interbank Offered Rate Is, How It's Used

Investopedia / Julia Kagan / Mira Norian

What Is London Interbank Offered Rate (LIBOR)?

The London Interbank Offered Rate (LIBOR) is a benchmark interest rate at which major global banks lend to one another in the international interbank market for short-term loans.

LIBOR, which stands for London Interbank Offered Rate, serves as a globally accepted key benchmark interest rate that indicates borrowing costs between banks. The rate is calculated and will continue to be published each day by the Intercontinental Exchange (ICE), but due to recent scandals and questions around its validity as a benchmark rate, it is being phased out.

According to the Federal Reserve and regulators in the UK, LIBOR will be phased out by June 30, 2023, and will be replaced by the Secured Overnight Financing Rate (SOFR). As part of this phase-out, LIBOR one-week and two-month USD LIBOR rates are no longer published as of Dec. 31, 2021.1

Key Takeaways

- LIBOR is the benchmark interest rate at which major global banks lend to one another.
- LIBOR is administered by the Intercontinental Exchange, which asks major global banks how much they would charge other banks for short-term loans.
- The rate is calculated using the Waterfall Methodology, a standardized, transaction-based, data-driven, layered method.
- LIBOR has been subject to manipulation, scandal, and methodological critique, making it less credible today as a benchmark rate.
- LIBOR is being replaced by the Secured Overnight Financing Rate (SOFR) on June 30, 2023, with phase-out of its use beginning after 2021.

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London Interbank Offered Rate (LIBOR)

Understanding LIBOR

LIBOR is the average interest rate at which major global banks borrow from one another. It is based on five currencies including the U.S. dollar, the euro, the British pound, the Japanese yen, and the Swiss franc, and serves seven different maturities—overnight/spot next, one week, and one, two, three, six, and 12 months.1

The combination of five currencies and seven maturities leads to a total of 35 different LIBOR rates calculated and reported each business day.1 The most commonly quoted rate is the three-month U.S. dollar rate, usually referred to as the current LIBOR rate.

Each day, ICE asks major global banks how much they would charge other banks for short-term loans. The association takes out the highest and lowest figures, then calculates the average from the remaining numbers. This is known as the trimmed average. This rate is posted each morning as the daily rate, so it's not a static figure. Once the rates for each maturity and currency are calculated and finalized, they are announced and published once a day at around 11:55 a.m. London time by the ICE Benchmark Administration (IBA).1

LIBOR is also the basis for consumer loans in countries around the world, so it impacts consumers just as much as it does financial institutions. The interest rates on various credit products such as credit cards, car loans, and adjustable-rate mortgages fluctuate based on the interbank rate. This change in rate helps determine the ease of borrowing between banks and consumers.

But there is a downside to using the LIBOR rate. Even though lower borrowing costs may be attractive to consumers, it does also affect the returns on certain securities. Some mutual funds may be attached to LIBOR, so their yields may drop as LIBOR fluctuates.

How Is LIBOR Calculated?

The IBA has constituted a designated panel of global banks for each currency and tenor pair. For example, 16 major banks, including Bank of America, Barclays, Citibank, Deutsche Bank, JPMorgan Chase, and UBS constitute the panel for U.S. dollar LIBOR.1 Only those banks that have a significant role in the London market are considered eligible for membership on the ICE LIBOR panel, and the selection process is held annually.

In April 2018, the IBA submitted a new proposal to strengthen the LIBOR calculation methodology. It suggested using a standardized, transaction-based, data-driven, layered method called the Waterfall Methodology for determining LIBOR.2

- The first transaction-based level involves taking a volume-weighted average price (VWAP) of all eligible transactions a panel bank may have assigned a higher weighting for transactions booked closer to 11:00 a.m. London time.
- The second transaction-derived level involved taking submissions based on transaction-derived data from a panel bank if it does not have a sufficient number of eligible transactions to make a Level 1 submission.
- The third level—expert judgment—comes into play when a panel bank fails to make a Level 1 or a Level 2 submission. It submits the rate at which it could finance itself at 11:00 a.m. London time with reference to the unsecured, wholesale funding market.

The Waterfall Methodology retains the trimmed average calculation.

The IBA calculates the LIBOR rate using a trimmed mean approach applied to all the responses received. Trimmed mean is a method of averaging, which eliminates a small specified percentage of the largest and smallest values before calculating the mean. For LIBOR, figures in the highest and lowest quartile are thrown out, and averaging is performed on the remaining numbers.3

Uses of LIBOR

LIBOR is used worldwide in a wide variety of financial products. They include the following:

- Standard interbank products like the forward rate agreements (FRA), interest rate swaps, interest rate futures, options, and swaptions, whereby options provide buyers with the right, but not the obligation, to purchase a security or interest rate product
- Commercial products like floating rate certificate of deposits and notes, variable rate mortgages, and syndicated loans, which are loans offered by a group of lenders
- Hybrid products like collateralized debt obligations (CDO), collateralized mortgage obligations (CMO), and a wide variety of accrual notes, callable notes, and perpetual notes
- Consumer loan-related products like individual mortgages and student loans

LIBOR is also used as a standard gauge of market expectation for interest rates finalized by central banks. It accounts for the liquidity premiums for various instruments traded in the money markets, as well as an indicator of the health of the overall banking system. A lot of derivative products are created, launched, and traded in reference to LIBOR. LIBOR is also used as a reference rate for other standard processes like clearing, price discovery, and product valuation.

A Brief History of LIBOR

The need for a uniform measure of interest rates across financial institutions became necessary as the market for interest rate-based products began evolving during the 1980s. The British Bankers' Association (BBA)—which represented the banking and financial services industry—set up BBA interest-settlement rates in 1984. Further streamlining led to the evolution of BBA LIBOR in 1986, which became the default standard interest rate for transacting in the interest rate- and currency-based financial dealings between financial institutions at the local and international levels.4

Since then, LIBOR has undergone many changes. The major one is when BBA LIBOR changed to ICE LIBOR in February 2014 after the Intercontinental Exchange took over the administration.5

Currencies involved in calculating LIBOR have also changed. While new currency rates have been added, many have been removed or integrated following the introduction of the euro rates. The 2008 financial crisis saw a significant decline in the number of tenors for which LIBOR was calculated.6

Alternatives to LIBOR

Though LIBOR was once accepted globally, there are other several other interest rates that are popularly followed across the globe.

For instance, Europe has the European Interbank Offered Rate (EURIBOR), Japan has the Tokyo Interbank Offered Rate (TIBOR), China has Shanghai Interbank Offered Rate (SHIBOR), and India has the Mumbai Interbank Offered Rate (MIBOR).

LIBOR Scandal of Rate Rigging

While LIBOR has been a long-established global benchmark standard for interest rates, it has had its fair share of controversies including a major scandal of rate rigging.

Major banks allegedly colluded to manipulate the LIBOR rates. They took traders' requests into account and submitted artificially low LIBOR rates to keep them at their preferred levels. The intention behind the alleged malpractice was to bump up traders' profits who were holding positions in LIBOR-based financial securities.7

Following reporting by the Wall Street Journal in 2008, major global banks, which were on the panels and contributed to the LIBOR determination process, faced regulatory scrutiny.8 It involved investigations by the U.S. Department of Justice. Similar investigations were launched in other parts of the globe including in the U.K. and Europe.

Major banks and financial institutions including Barclays, ICAP, Rabobank, Royal Bank of Scotland, UBS, and Deutsche Bank faced heavy fines. Punitive actions were also taken on their employees who were found to be involved in the malpractice.7 The scandal was also one of the primary reasons why LIBOR shifted from BBA administration to ICE.

Benefits of Watching LIBOR Rates

Despite the rate-setting scandals, LIBOR rates provide a useful benchmark for the level of activity in the global economy. A falling LIBOR indicates that it is becoming easier to borrow money, possibly forecasting an increase in economic activity. A rising LIBOR means that it is getting harder to borrow money, meaning business activity is likely to slow down.

These rates are particularly significant to a prospective borrower. When you borrow money from a bank, LIBOR rates may account for part of your interest rate. A high LIBOR means that you may have to pay a higher interest rate on your mortgage or personal loan, while a low LIBOR means a more favorable rate.

Special Considerations: Phasing Out LIBOR

Although LIBOR has been used since the 1980s, regulatory reforms have begun in recent years to reform benchmark rates and ultimately replace LIBOR as the interbank borrowing rate. U.K. banks are no longer required to publish LIBOR rates after 2021.1

The new system is designed to replace the conjecture surrounding interest rates that was predominant under LIBOR and instead use actual transaction rates. The secured overnight financing rate (SOFR) will replace

LIBOR in 2023. The SOFR is also a benchmark interest rate used for dollar-denominated loans and derivative contracts. SOFR is different than LIBOR in that it's based on actual observed transactions in the U.S. Treasury market while LIBOR used estimations of borrowing rates.

However, SOFR is likely to be used in the U.S. and the U.K. but other countries are exploring using their own version of a benchmark rate for when LIBOR is phased out.

Examples of LIBOR-Based Products and Transactions

The most straightforward example of a LIBOR-based transaction is a floating rate bond, which pays an annual interest based on LIBOR, say at LIBOR + 0.5%. As the value of LIBOR changes, the interest payment will change.

LIBOR also applies to interest rate swaps—contractual agreements between two parties to exchange interest payments at a specified time. Assume Paul owns a $1 million investment that pays him a variable LIBOR-based interest rate equal to LIBOR + 1% each quarter. Since his earnings are subject to LIBOR values and are variable in nature, he wants to switch to fixed-rate interest payments. Then there is Peter, who has a similar $1 million investment, which pays him a fixed interest of 1.5% per quarter. He wishes to get a variable earning, as it may occasionally give him higher payments.

Both Paul and Peter can enter into a swap agreement, exchanging their respective interest receipts. Paul will receive the fixed 1.5% interest over his $1 million investment from Peter, which equals $15,000 while Peter receives LIBOR + 1% variable interest from Paul.

If LIBOR is 1%, then Peter will receive 2% or $20,000 from Paul. Since this figure is higher than what he owes to Paul, in net terms, Peter will get $5,000 ($20,000 - $15,000) from Paul. By next quarter, if LIBOR comes down to 0.25%, Peter will be eligible to receive 1.25% or $12,500 from Paul. In net terms, Paul will get $2,500 ($15,000 - $12,500) from Peter.

Such swaps essentially fulfill the requirement of both the transacting parties who wanted to change the type of interest receipts (fixed and floating).

Is LIBOR Reliable?

While LIBOR was once a trusted benchmark for global interest rates, the 2012 rate-rigging scandal raised many questions about its objectivity. Many financial institutions are phasing out LIBOR in favor of other benchmarks, such as SOFR.

What Is the LIBOR Today?

The LIBOR Overnight Rate was 2.31786 as of August 18, 2022. You can find the latest LIBOR rates on the *Wall Street Journal*.9

What Is Replacing LIBOR?

There are several alternative indexes that have been proposed to replace the USD LIBOR. One of them, Ameribor, reflects the average borrowing costs for thousands of banks and financial institutions in the United States. Another is the Secured Overnight Financing Rate (SOFR), based on the Treasury repo rate. In 2022, the U.S. Congress passed legislation to make SOFR the official replacement for LIBOR in the United States.10

The Bottom Line

LIBOR, or the London Interbank Offered Rate, was a global benchmark that represented the interest rates on short-term loans from one bank to another. However, the index fell under suspicion in 2012, when some bankers were discovered manipulating the index for their own benefit. Most countries have since phased out LIBOR, and the United States is soon to follow suit.