What are IBORs?

Interbank offered rates (IBORs), such as the London Interbank Offered Rate (LIBOR), the European Interbank Offered Rate (Euribor) or the Euro Overnight Index Average (Eonia), are a measure of the interest rates that banks were willing to pay in order to lend or borrow money from each other.

IBORs are heavily used by market participants across a wide range of product types:

- Lenders and borrowers use IBORs as a benchmark for determining the interest rates for various types of products, such as corporate loans and mortgages.
- Companies use IBORs as a benchmark rate for debt-market transactions, such as issuing variable-interest bonds.
- IBORs are also standard benchmarks in the derivatives markets.

IBOR indices for the GBP LIBOR, the CHF LIBOR, the JPY LIBOR, the EUR LIBOR and the Eonia were discontinued in December 2021. The **USD LIBOR** will still be published until June 2023, for all of its settings, with the exception of 1 week and 2 months (these stopped in December 2021).

Why have IBORs been reformed?

IBORs are published every day and are calculated using the average rates at which a group of banks, known as "benchmark panel banks", grant/accept wholesale unsecured loans, in selected currencies. The submissions from the "benchmark panel banks" are determined using data from a range of applicable transaction types. However, these submissions can also use qualitative criteria, such as the expert opinion of panel-bank members submitting the data.

As a result of the financial crisis, the number of unsecured interbank lending transactions has decreased. This has led to a greater reliance on the expert opinion of benchmark-panel banks when making submissions for putting together the IBORs.

In 2013, the International Organization of Securities Commissions (IOSCO) published the "Principles for Financial Benchmarks" (IOSCO Principles), which was followed by the Financial Stability Board (FSB) publishing the "Reforming Major Interest Rate Benchmarks" report in 2014. These reports set out a series of recommendations to strengthen existing benchmarks by underpinning them, as far as possible, with real transaction data, and to develop alternative almost risk-free rates. In addition, following the publication of the IOSCO Principles, new regulations have been adopted, such as the European Benchmarks Regulation (BMR)¹, which set out that work must be done in order to improve the accuracy and integrity of interest rates.

¹ Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds, amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) no. 596/2014

As a result, some of the IBORs are transitioning to new or modified benchmark indices (such as the Eonia and the LIBOR) or have been reformed so that they comply with the BMR (such as the Euribor.²).

The Eonia's and LIBOR's transition

International supervisory bodies, financial authorities and market participants are working to replace the Eonia and LIBOR with almost risk-free interest rates.

National working groups have been created, featuring market participants from both the public and private sectors, in order to identify alternative almost risk-free rates that comply with the principles applying to the financial benchmarks outlined by the IOSCO.

The proposed alternative almost risk-free rates for the Eonia and LIBOR are as follows:



When will the Eonia and LIBOR be transitioning to new rates?

The timetable for transitioning the Eonia and LIBOR indices to new rates is as follows:

EONIA

On 13 September 2018, the working group recommended adopting the euro short-term rate (€STR) as the risk-free rate for the eurozone rather than the Eonia. Starting from 2 October

² The Euribor will not be transitioning to a new rate, but it has been reformed so that it complies with the BMR as an index. The Euribor can still be used on new and existing contracts in the future.

³ As urged by the Financial Stability Board's Official Sector Steering Group, the International Swaps and Derivatives Association (ISDA) is considering alternatives for EUR LIBOR derivatives, based around the euro short-term rate (€STR) as the identified risk-free rate for the eurozone

2019, the date from which the €STR became available, the Eonia has been calculated as the €STR plus a spread of 8.5 basis points.

This change in the Eonia methodology is intended to ease the market's transition from the Eonia market to the €STR. The Eonia rate was discontinued on 3 January 2022.

LIBOR

On 5 March 2021, the FCA confirmed that all LIBORs would no longer be published by administrators or would no longer be representative:

- Immediately after 31 December 2021, for GBP, EUR, CHF and JPY LIBOR in all settings, and USD 1-week and 2-month rates.
- Immediately after 30 June 2023, for all other USD LIBOR settings (Overnight, 1month, 3-month, 6-month and 12-month)

And now?

Authorities and sector working groups are assessing the implications of these changes, including how best to transition to almost risk-free benchmarks for the Eonia and the LIBOR.

Santander is working hand in hand with the industry and is determined to ensure that the transition is as smooth as possible, while keeping its customers informed throughout the process.

New contracts at Banco Santander now already refer to the new RFR interest rates. Please find access links to publications for the main benchmark rates that Banco Santander uses for retail and commercial banking below. These benchmarks have been identified by the Regulatory Bodies for each of the jurisdictions for these currencies and, therefore, apply generally to consumers, as well as to certain types of products, such as products that are discounted, by using the Forward-looking methodology, where the interest rate that applies at the beginning of the period is known.

Currency	RFR Index	Methodologies	Benchmark links
USD	SOFR	Term RFR (forward-looking methodology)	CME Group Term SOFR
GBP	SONIA	Term RFR (forward-looking methodology)	ICE Term Risk Free Rates (RFR) Portal
CHF	SARON	RFR Overnight Composite Averages	The Working Group (NSWG) has concluded that no forward-looking rates will be published for SARON. Instead, SARON composite averages will be used in in-advance methodology, so that, in the same way, the interest rate at the start of the period is available. <u>SIX Indices - Swiss Reference Rates</u> (SARON) (six-group.com)
YAſ	TORF (TORF is the forward- looking	Term RFR (forward-looking methodology)	TORF - Tokyo Term Risk Free Rate QUICK Corp.

rate for	
the	
Japanese	
Yen)	

In addition, if you would like more details on the new benchmark rates, the links for the publications by the administrators of the RFR Overnight and their composite averages (used for backward-looking methodologies) will also appear, along with the details on their prices, construction, methodology and other relevant aspects.

Overnight Rates

Currenc y	RFR Index	Methodologies	Benchmark links
USD	SOFR	RFR Overnight rate	Secured Overnight Financing Rate Data - Federal Reserve Bank of New York (newyorkfed.org)
GBP	SONIA	RFR Overnight rate	SONIA interest rate benchmark Bank of England
CHF	SARON	RFR Overnight rate	SIX Indices - Swiss Reference Rates (SARON) (six- group.com)
JPY	TORF (TORF is the forward- looking rate for the Japanes e Yen)	RFR Overnight rate	<u>Call Money Market Data (updated every business day):</u> 日本銀行 Bank of Japan (boj.or.jp)

Composite averages for the RFR Overnight rates

Currenc y	RFR Index	Methodologies	Benchmark links
USD	SOFR	RFR Overnight Composite Averages	Secured Overnight Financing Rate Data - Federal Reserve Bank of New York (newyorkfed.org)
GBP	SONIA	RFR Overnight Composite Averages	The Bank of England does not publish SONIA composite rates
CHF	SARON	RFR Overnight Composite Averages	SIX Indices - Swiss Reference Rates (SARON) (six- group.com)
JPY	TORF (TORF is the forward- looking rate for the	RFR Overnight Composite Averages	<u>TONA Averages & TONA Index QUICK 日本円の無担</u> <u>保コール翌日物金利(TONA)から複利関連指数</u> <u>を算出 (moneyworld.jp)</u>

Japanes e Yen)	