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ICE Synthetic 6-month LIBOR for Sterling

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Introduction

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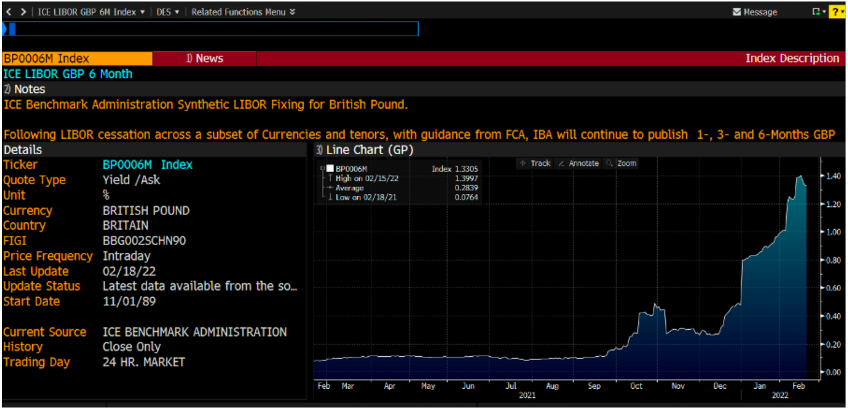
- The FCA is requiring IBA to calculate these settings using a changed, "synthetic" methodology. The "synthetic" methodology is not based on panel bank contributions and is not representative of the underlying market or economic reality the setting is intended to measure, including for the purposes of the BMR.

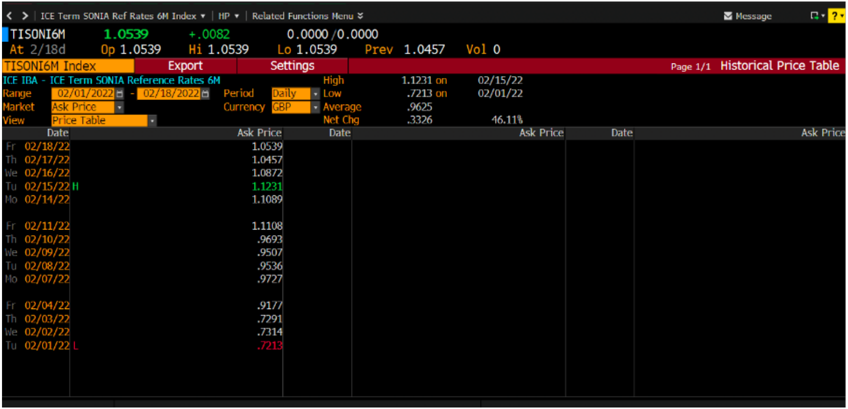
Synthetic LIBOR

- 6-month Sterling LIBOR is to be calculated as the sum of
  - The ICE 6-month Term SONIA Reference Rate
  - The ISDA Spread Adjustment for 6-month sterling LIBOR



ICE 6-month Term SONIA Reference Rate

- Calculation based on “Waterfall” methodology (see Appendix)


< > ICE Term SONIA Ref Rates 6M Index ▾ | HP ▾ | Related Functions Menu | Message

TISONI6M 1.0539 +.0082 0.0000 /0.0000
At 2/18d Op 1.0539 Hi 1.0539 Lo 1.0539 Prev 1.0457 Vol 0

TISONI6M Index | Export | Settings | Page 1/1 Historical Price Table

ICE IBA - ICE Term SONIA Reference Rates 6M

Range 02/01/2022 - 02/18/2022 Period Daily Market Ask Price Currency GBP View Price Table

High 1.1231 on 02/15/22
Low .7213 on 02/01/22
Average .9625
Net Chg .3326 46.11%

Date		Ask Price
Fr	02/18/22	1.0539
Th	02/17/22	1.0457
We	02/16/22	1.0872
Tu	02/15/22 H	1.1231
Mo	02/14/22	1.1089
Fr	02/11/22	1.1108
Th	02/10/22	.9693
We	02/09/22	.9507
Tu	02/08/22	.9536
Mo	02/07/22	.9727
Fr	02/04/22	.9177
Th	02/03/22	.7291
We	02/02/22	.7314
Tu	02/01/22 L	.7213

Forward-looking, term risk-free-rates are to help market participant manage benchmark transition.

Spread Adjustment for 6-month sterling LIBOR

- This spread adjustment is an important part of the overall fallback rate, and reflects a portion of the structural differences between interbank offered rates (IBORs) and the RFRs used as a basis for the fallbacks — IBORs incorporate a credit risk premium and liquidity factor, while RFRs are risk free or nearly risk free

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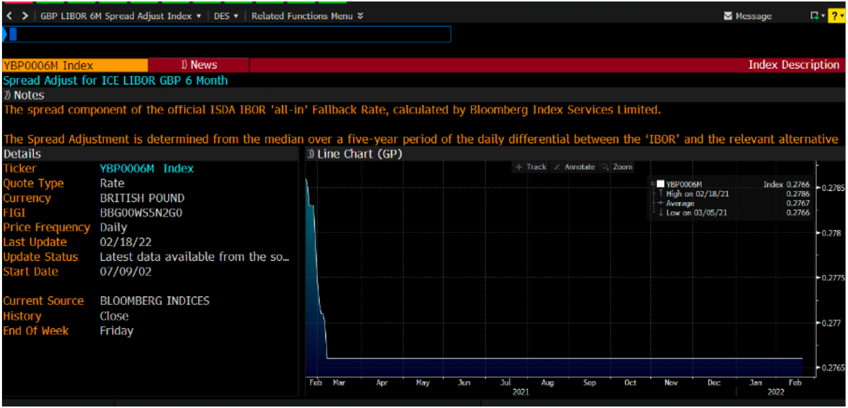
  - On 5 March 2021, the ISDA set it for each LIBOR tenor and ticker
  - For 6-month GBP, fixed adjustment spread is set at 0.2766

Spread Adjustment for 6-month sterling LIBOR



Synthetic 6-month Sterling LIBOR

To calculate 6-month LIBOR via "synthetic" methodology on 18 February 2022:

$$\text{SONIA}_{0,6} + \text{SPREAD}^{\text{GBP}}_{0,6} = \underbrace{1.0539}_{\text{Slide 4}} + \underbrace{0.2766}_{\text{Slide 5}} = \underbrace{1.3305}_{\text{Slide 8}}$$

Synthetic 6-month Sterling LIBOR

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< > | ICE LIBOR GBP 6M Index ▾ | HP ▾ | Related Functions Menu | Message

BP0006M 1.33050 +.00820 0.00000 /0.00000
At 2/18d Op 1.33050 Hi 1.33050 Lo 1.33050 Prev 1.32230 Vol 0

BP0006M Index | Export | Settings | Page 1/1 Historical Price Table

ICE LIBOR GBP 6 Month
Range 02/01/2022 - 02/18/2022 Period Daily
Market Ask Price Currency GBP
View Price Table

High	1.39970 on 02/15/22
Low	.99790 on 02/01/22
Average	1.23913
Net Chg	.33260 33.33%

Date	Ask Price	Date	Ask Price	Date	Ask Price
Fr 02/18/22	1.33050				
Th 02/17/22	1.32230				
We 02/16/22	1.36380				
Tu 02/15/22 H	1.39970				
Mo 02/14/22	1.38550				
Fr 02/11/22	1.38740				
Th 02/10/22	1.24590				
We 02/09/22	1.22730				
Tu 02/08/22	1.23020				
Mo 02/07/22	1.24930				
Fr 02/04/22	1.19430				
Th 02/03/22	1.00570				
We 02/02/22	1.00800				
Tu 02/01/22 L	.99790				

References

- Article 23A Benchmarks Regulations – Notice of Requirements
- Bloomberg Terminal
- FCA announcement on future cessation and loss of representativeness of the LIBOR benchmarks
- LIBOR Cessation and the Impact on Fallbacks
- Term SONIA Reference Rates – Calculation Methodology

Appendix – Term SONIA Calculation (Level 1)

1. IBA collects tradable bid and offer prices and volumes for eligible SONIA-linked overnight interest rate swaps available on the central limit order books of regulated, electronic trading venues in respect of a two-hour window before the relevant ICE Term SONIA Reference Rate calculation
2. The two-hour window is divided into 24 blocks of five minutes each and a random snapshot time is selected for each of these five-minute blocks (i.e. 24 snapshots)

Appendix – Term SONIA Calculation (Level 1)

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Time	Bid	Ask	Volume (in mln)	Block	Venue
2/18/2022 12:32:00 PM	1.05482	1.05978	132	7	Eurex
2/18/2022 12:32:00 PM	1.05482	1.05978	250	7	LCH
2/18/2022 12:32:03 PM	1.05507	1.06003	246	7	LCH
2/18/2022 12:32:03 PM	1.05532	1.06028	197	7	Eurex
2/18/2022 12:32:05 PM	1.05532	1.06028	279	7	Eurex
2/18/2022 12:32:05 PM	1.05532	1.06028	112	7	LCH
2/18/2022 12:32:06 PM	1.05532	1.06028	258	7	LCH
2/18/2022 12:32:06 PM	1.05532	1.06028	115	7	CME
2/18/2022 12:32:07 PM	1.05531	1.06029	236	7	CME
2/18/2022 12:32:07 PM	1.05531	1.06029	132	7	LCH
2/18/2022 12:32:08 PM	1.05481	1.05979	285	7	LCH
2/18/2022 12:32:08 PM	1.05481	1.0598	215	7	CME
2/18/2022 12:32:09 PM	1.0545	1.0595	265	7	Eurex
2/18/2022 12:32:09 PM	1.0545	1.0595	141	7	Eurex
2/18/2022 12:32:11 PM	1.05415	1.05915	178	7	LCH

Appendix – Term SONIA Calculation (Level 1)

3. A synthetic order book is created at each snapshot time by combining and ranking (by price) the eligible bids and offers from each trading venue. These prices (and the associated volumes) are used to calculate the volume weighted bid and the volume weighted offer of the prices that would result from filling a hypothetical trade of Standard Market Size on each side of the market. A volume weighted average mid-price is then calculated from the volume weighted bid and the volume weighted offer

Appendix – Term SONIA Calculation (Level 1)

4. Snapshots with insufficient tradable volume to fill the Standard Market Size (more than 500 million for 6-month LIBOR), or that contain crossed or zero-spread bid and offer prices, are not included in the calculation. Remaining snapshots are ranked in order of their volume weighted average mid-prices and the snapshots with a volume weighted average mid-price above the 75th percentile or below the 25th percentile are also discarded
5. If at least six snapshots remain, the volume weighted average mid-prices from these snapshots are quality-weighted based on the difference between the volume weighted bid and the volume weighted offer and averaged, in order to determine the applicable ICE Term SONIA Reference Rate

Appendix – Term SONIA Calculation (Level 1)

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	CME			LCH			Eurex										ICE 6 mo	
Block	Bid	Ask	Volume	Bid	Ask	Volume	Bid	Ask	Volume	Good quote	SMS	VWB	VWO	VWMP	Percentile check	VWO - VWB	SONIA	
1	1.0486	1.0534	135	1.048	1.0528	166	1.0476	1.0524	119	Yes	No						1.04978	
2	1.0492	1.0538	238	1.0491	1.0539	269	1.0492	1.0538	128	Yes	Yes	1.04914	1.05386	1.05150	Yes	0.00472		ICE Synthetic
3	1.0487	1.0533	199	1.0499	1.0545	251	1.0481	1.0527	169	Yes	Yes	1.04902	1.05363	1.05132	Yes	0.00461		LIBOR (6mo)
4	1.0496	1.0544	174	1.0496	1.0544	248	1.0496	1.0544	182	Yes	Yes	1.04961	1.05439	1.05200	Yes	0.00478		1.3264
5	1.0508	1.0554	109	1.0508	1.0555	129	1.0507	1.0553	252	Yes	No						ISDA Spread	
6				1.0509	1.0555	192				No	No						Adjustmet	
7	1.0508	1.0554	254	1.0509	1.0555	170	1.0506	1.0552	140	Yes	Yes	1.05075	1.05541	1.05308	Yes	0.00466	0.2766	
8	1.0548	1.0596	166	1.0519	1.0567	273	1.0521	1.0569	122	Yes	Yes	1.05280	1.05761	1.05521	No			
9	1.0549	1.0597	100	1.0533	1.0583	286	1.0548	1.0596	221	Yes	Yes	1.05412	1.05899	1.05656	No			
10	1.0533	1.0582	297	1.0532	1.0578	171	1.053	1.058	267	Yes	Yes	1.05316	1.05804	1.05560	No			
11	1.0537	1.0583	136	1.0523	1.0569	290	1.0536	1.0584	280	Yes	Yes	1.05310	1.05775	1.05542	No			
12	1.0526	1.0574	229	1.0521	1.0569	149	1.0526	1.0574	144	Yes	Yes	1.05249	1.05723	1.05486	No			
13	1.0505	1.0555	249	1.0516	1.0564	229	1.05	1.055	133	Yes	Yes	1.05081	1.05569	1.05325	Yes	0.00488		
14	1.0504	1.055	102	1.0492	1.0538	110	1.0498	1.0544	223	Yes	No							
15	1.0399	1.0441	230	1.0463	1.0497	299	1.0409	1.0451	117	Yes	Yes	1.04305	1.04687	1.04496	Yes	0.00382		
16	1.0359	1.0401	192	1.0366	1.0414	147	1.0363	1.0407	264	Yes	Yes	1.03625	1.04067	1.03846	No			
17	1.037	1.041	219	1.0402	1.0446	203	1.0373	1.0417	270	Yes	Yes	1.03804	1.04232	1.04018	No			
18	1.0343	1.0387	255	1.036	1.04	247	1.0388	1.0432	238	Yes	Yes	1.03631	1.04058	1.03845	No			
19	1.0408	1.0452	196	1.0397	1.0443	133	1.0377	1.0418	234	Yes	Yes	1.03922	1.04360	1.04141	No			
20	1.0406	1.0454	224	1.0393	1.0441	107	1.0377	1.0423	227	Yes	Yes	1.03918	1.04388	1.04153	No			
21	1.0428	1.0476	221	1.0436	1.0485	239	1.0426	1.0474	116	Yes	Yes	1.04309	1.04791	1.04550	Yes	0.00482		
22	1.046	1.051	140	1.0464	1.0513	258	1.0465	1.0515	267	Yes	Yes	1.04631	1.05128	1.04879	Yes	0.00497		
23	1.0455	1.0505	155	1.0445	1.0496	288	1.0455	1.0505	241	Yes	Yes	1.04508	1.05009	1.04759	Yes	0.00501		
24	1.0469	1.0511	269	1.0469	1.0511	293	1.0469	1.0511	180	Yes	Yes	1.04689	1.05111	1.04900	Yes	0.00422		

Good quotes — not a crossed or zero-spread bid and offer price criteria
SMS — fulfilling Standard Market Size criteria
VWB, VWO — volume weighted bid and volume weighted offer
VWMP — volume weighted mid-price
Percentile check — VWMP lying within 25th and 75th percentiles criteria
VWO – VWB — difference between VWO and VWB

Appendix – Term SONIA Calculation (Level 2)

1. If fewer than six snapshots remain after Level 1, IBA will use Dealer to client bid and offer prices and volumes displayed electronically by trading venues in respect of the same two-hour window to calculate the applicable Term SONIA Reference Rate
2. The two-hour window is again divided into 24 blocks of five minutes each and a random snapshot time is selected for each block
3. Where a trading venue provides prices from dealers for multiple categories of clients within a snapshot, IBA will select the prices from a single client category per dealer, based on the tightest spread and largest volume for each client category within the snapshot

Appendix – Term SONIA Calculation (Level 2)

4. The selected, eligible bids and offers from each dealer from each trading venue are combined and ranked (by price) to create a synthetic order book at each snapshot time, and any crossed bid and offer volume within the orderbook is uncrossed. The remaining prices and associated volumes are used to calculate the volume weighted bid and the volume weighted offer of the prices that would result from filling a hypothetical trade of Standard Market Size in the same manner as for Level 1, with the volume weighted average mid-price also calculated in the same way

5. Illiquid snapshots are excluded in the same manner as for Level 1, and remaining snapshots are ranked in order of their volume weighted average mid-prices and the snapshots with a volume weighted average mid-price above the 75th percentile or below the 25th percentile are also discarded
6. If at least six snapshots remain, the applicable Term SONIA Reference Rate is determined as the quality-weighted average of the applicable volume weighted average mid-prices in the same manner as for Level 1.

Appendix – Term SONIA Calculation (Level 3)

1. If fewer than six snapshots remain after Level 2, IBA will use:
   - SONIA-linked futures' settlement prices for contracts maturing within each calendar month spanned by the relevant tenor period, published on the preceding trading day on an electronic trading venue
   - Overnight SONIA rates on the date the term rate is being derived and from the beginning of the current calendar month
   - Scheduled Monetary Policy Committee meeting dates during the tenors of the relevant futures contracts (being dates that might be expected to result in rate changes over the relevant period)

Appendix – Term SONIA Calculation (Level 3)

2. A step function model is then used to determine, from the published SONIA rates and futures' settlement prices, the implied average daily SONIA rates. This is done from the date the term rate is being derived until the end of the last calendar month spanned by the relevant tenor, ascribing implied rate changes for each month to the relevant Monetary Policy Committee meeting date (or the first business day of the month if there is no scheduled Monetary Policy Committee meeting date)
3. The implied average daily SONIA rates are then compounded over the relevant tenor period to produce the applicable ICE Term SONIA Reference Rate.