

Minutes of LIBOR Trade Association Working Party Meeting
held on 2 May 2019

Present:

ACT
AFME
APLMA
IBA
ICMA
ICMSA
ISDA
LMA
SIFMA
TACT
UK Finance

1. Introduction

The purpose of the meeting was for the trade associations to provide updates on any developments in respect of LIBOR transition since the last meeting, and for ICE Benchmark Administration (“**IBA**”) to provide an overview of IBA’s work streams in respect of the ICE LIBOR User Survey, ICE Term RFR Portal, and U.S. Dollar ICE Bank Yield Index.

2. APLMA update

It was noted that there are a number of upcoming educational events. On 15 May 2019, the Reserve Bank of Australia is hosting a workshop focusing on the cessation of LIBOR and its impact on the Australian financial markets. The APLMA is also due to hold a seminar focusing on the discontinuation of LIBOR in Singapore. The Hong Kong Exchange and Clearing Limited is holding an OTC derivatives conference where the APLMA will present on a panel providing an update on IBORs.

It was noted that there were no other significant developments to report on, however there is a positive outlook in terms of information sharing in respect of the transition away from LIBOR.

3. ICMA update

ICMA continues its work on exploring market-led solutions for transitioning legacy bonds referencing LIBOR to RFRs.

ICMA continues to monitor new issuances in the SONIA market, which has expanded beyond the floating rate note (“**FRN**”) market to securitisations.

It was noted that the deadline for feedback to the Sterling RFR Working Group’s discussion paper on conventions for referencing SONIA in new contracts had closed on 30 April 2019.

ICMA also continues to track the work of the Regulatory Dependencies Taskforce which was set up by the Sterling RFR Working Group.

On 15 May 2019, ICMA will hold a panel about the transition to RFRs and the international bond market at its [AGM Conference in Stockholm](#). A number of regulators from the US, Switzerland, UK and the Euro area are due to participate in this panel.

4. ICMSA update

It was noted that ICMSA remains concerned with the volume of outstanding legacy deals and the number of new deals which continue to reference LIBOR; these will all need to be transitioned to RFRs.

It was noted that it is crucial to develop a universally adopted market approach to deal with this issue going forward. International coordination would be of paramount importance to streamline approaches across different jurisdictions, given the complexities that would arise if different approaches were adopted by different currency jurisdictions.

5. LMA update

The LMA continues to work on producing LMA documentation for the transition.

The LMA continues to work on outreach and education. On 5 April 2019, the LMA released a webinar (which is publicly available) delivered by Kam Mahil entitled "[LIBOR transition: Conventions for referencing risk-free rates in new agreements](#)". It was noted that the LMA had alerted its members to the SONIA market conventions paper and encouraged them to provide feedback on the paper directly.

6. TACT update

TACT had been engaging with its members to ascertain their key concerns and with the ICMSA Trustee Sub-Committee, as some of the TACT members are also members of that committee. It was noted that given the particular nature of the role of trustees, it is more appropriate to adopt a 'wait and see' approach ahead of the outcomes of on-going regulatory discussions. Trustees will be better placed to act once there is more certainty.

On 22 May 2019, TACT is holding its [annual conference](#) where there will be a panel focusing on IBORs and the issues that trustees may face in the course of amending documentation.

7. UK Finance update

It was noted that in respect of mortgages, whilst UK Finance continues to assume the need for a term SONIA reference rate, UK Finance had been engaging with members to determine whether a form of backward compounded rate could be suitable for mortgages.

UK Finance is continuing to engage with its members in respect of business loans by identifying members with outstanding LIBOR exposures, helping those firms to work out their LIBOR exposures, and is hoping to be able to assist in breaking down their exposures with respect of individual clients.

8. AFME update

AFME is continuing to focus on amending its negative consent wording for the transition from LIBOR to RFRs for securitisations. This is being discussed with members and is a work in progress.

AFME had recently held a well-attended conference in Brussels, which included representatives from the European Commission and the Belgian financial supervisors. It was noted that attendance by government bodies is indicative of a high interest in this topic.

9. ACT update

The ACT is continuing to work on outreach and education, and on 2 May 2019, the ACT held a webinar entitled "[LIBOR transition – next steps for treasurers](#)".

10. SIFMA update

It was noted that on 22 April 2019, the ARRC released a [User's Guide to SOFR](#). On 25 April 2019, the ARRC also released its recommended fallback language for [floating rate notes](#) and [syndicated loans](#), and is expecting to issue further recommended fallback language on securitisations and bilateral loans in due course.

11. IBA update

IBA's work had been informed by three key priorities:

- 1) Ensuring that LIBOR is published with the greatest possible integrity and is operationally robust while it continues to be published. On 1 April 2019, [IBA successfully completed the transition of LIBOR panel banks to the new waterfall methodology](#) which was welcomed by banks and regulators. EMMI is working to adopt a similar methodology to ensure that EURIBOR is compliant with the European Benchmarks Regulation ("BMR").
- 2) Providing solutions for the most widely used LIBOR settings to users with outstanding LIBOR-linked contracts which are impossible or impractical to modify. IBA is continuing to engage with the official sector and panel, and potential panel, banks with a view to facilitating the continued publication of certain LIBOR settings for a limited time after 2021. This additional period would help embed RFRs in the systems before any LIBOR discontinuation. This work stream is of key importance both from a financial stability perspective and to ensure that contracts entered into before the transition period can settle as per the economic understanding of the contract holders. It was noted that it is important to emphasise that the proposed continued publication of certain LIBOR settings is not intended as an alternative to the transition to RFRs and there is no guarantee that any LIBOR settings will in fact continue to be published after the end of 2021.
- 3) Developing alternative solutions to facilitate the transition from LIBOR to RFRs (including a term SONIA reference rate and the US Dollar ICE Bank Yield Index).

The Working Party was then taken through a slide presentation which provided an update on the following three areas: (i) ICE LIBOR User Survey; (ii) ICE Term RFR Portal; and (iii) U.S. Dollar ICE Bank Yield Index.

ICE LIBOR User Survey

IBA had conducted two surveys to inform its intended production of certain LIBOR settings for a limited time beyond 2021:

- a survey of existing global panel banks to identify the LIBOR settings that are critical to the global financial system (the results of which were not made publicly available); and
- a [survey](#) of end-users of LIBOR to determine which LIBOR settings were most commonly used. A reference was made to slides 3 to 12.

The [results](#) of the survey were published in March 2019 and included feedback from 109 respondents which comprised, in large proportion, responses from cash market participants. Whilst the results were largely unsurprising, some responses provided in respect of EURO LIBOR were indeed surprising. However, it is likely that respondents may have confused EURO LIBOR with EURIBOR as published by EMMI. The number of respondents who had selected each LIBOR currency and tenor pair is shown on slide 5.

It was noted that an overwhelming majority of respondents focused on lending activities when asked to set out the main uses of currency and tenor pairs that they used the most. It was noted that facilitating solutions for the cash markets is key given that, unlike derivative contracts, contracts in respect of cash products are harder to amend.

IBA has now accumulated a sense on the appropriate set of currency and tenor pairs to inform its efforts to publish certain LIBOR settings for a limited time after 2021 and is now focusing on engaging with panel and potential panel banks to seek their commitment to providing continued

submissions in respect of those tenor and currency pairs. The specific tenors and currencies for which panel bank support would be sought has not yet been publicly announced by IBA.

ICE Term RFR Portal

In October 2019, IBA launched the ICE Term RFR Portal which provides realised compounded and simple average term rates for SONIA, SOFR, TONA and will do so for €STR once it is published from 2 October 2019. It was noted that SARON will not be included in the Portal as the rate is controlled and distributed exclusively by the SIX Swiss Exchange.

In the Sterling market, IBA is seeking to produce a forward-looking term SONIA rate. So far, IBA has produced indicative figures on the basis of SONIA futures, rather than OIS quotes (since that data is not yet available on an electronic exchange).

It was noted that Slide 16 shows that a realised compounded SONIA rate with a 5-day lag may be added to the ICE Term RFR Portal to reflect this increasing standard in the FRN market.

It was noted that IBA is committed to developing a forward-looking SONIA term rate in accordance with the principles set by the FSB / OSSG, the Sterling RFR Working Group and the BMR.

IBA is going to leverage existing infrastructure (e.g. ICE Term RFR Portal) and available benchmark methodologies (e.g. ICE Swap Rate) to produce term settings that are robust enough to ensure daily publication.

One member of the Working Party enquired about the anticipated timing for development of the SONIA forward-looking term rate (given it required changes in the swaps market) and another member of the Working Party enquired whether the timing of IBA's work in this respect is influenced by the volume of trades. It was noted that this very much depends on whether banks are willing to be transparent with respect of how they trade SONIA-based swaps which would allow IBA to produce an implied forward-looking SONIA term rate in this way.

U.S. Dollar ICE Bank Yield Index

In January 2019, IBA published a paper on a potential new U.S. Dollar ICE Bank Yield Index (the "**Index**"). This is intended to be fully transaction-based and designed to measure the yields at which investors are willing to invest U.S. dollar funds in large, internationally active banks on a wholesale, unsecured basis over one, three and six month periods. The Index has a close correlation to LIBOR (see slide 25).

The Index has been developed to meet the potential needs of cash products that have historically referenced USD LIBOR in their contracts (in particular because it includes a dynamic credit spread). It was noted that the Index is intended to be representative of banks' marginal unsecured funding costs. See slides 21 to 26 for the specificities of the Index.

It was noted that IBA had been working with a number of US banks on the Index who noted that their preferred methodology for the Index would be to create a hybrid in conjunction with SOFR (i.e. a term SOFR rate plus a spread based on the Index) (see slide 26). It was noted that from an economic perspective, this would allow lenders who operate in the US dollar market to remain comfortable with providing large unfunded commitments (e.g. revolving credit facilities) given that the credit spread would protect lenders from sudden stress in the market (which a rate just based on SOFR would not).



Short Term Interest Rate Benchmarks

LIBOR Trade Association Working Party

Tim Bowler

IBA, President

May 2019



Transforming global markets



LIBOR End-Users Survey Results

ICE LIBOR USER SURVEY

OVERVIEW

ICE Benchmark Administration (IBA) launched the survey on the use of LIBOR on December 4, 2018, in order to identify the LIBOR settings that are most widely used. The survey closed on February 15, 2019, and the results are published herein and at <https://www.theice.com/iba/ice-benchmark-administration-survey-on-the-use-of-libor>.

Using the results of this survey and other outreach work, IBA will work with globally active banks to seek to publish certain LIBOR settings after year-end 2021. IBA expects to issue further press releases regarding this work as it progresses.

The primary goal of IBA's work in seeking to obtain sufficient banking industry support to publish certain LIBOR settings after year-end 2021 is to provide these settings to users with outstanding LIBOR-linked contracts that are impossible or impractical to modify. Any such settings will need to be compliant with relevant regulations and in particular those regarding representativeness.

IBA's work is also designed to facilitate the industry's progress towards an orderly adoption of alternative 'risk-free' reference rates into the financial system, as called for by the Financial Conduct Authority and the central banks.

Notwithstanding the results of the survey and IBA's work, there is no guarantee that any LIBOR settings will continue to be published after year-end 2021. Users of LIBOR should not rely on the continued publication of any LIBOR settings when developing transition or fall back plans.

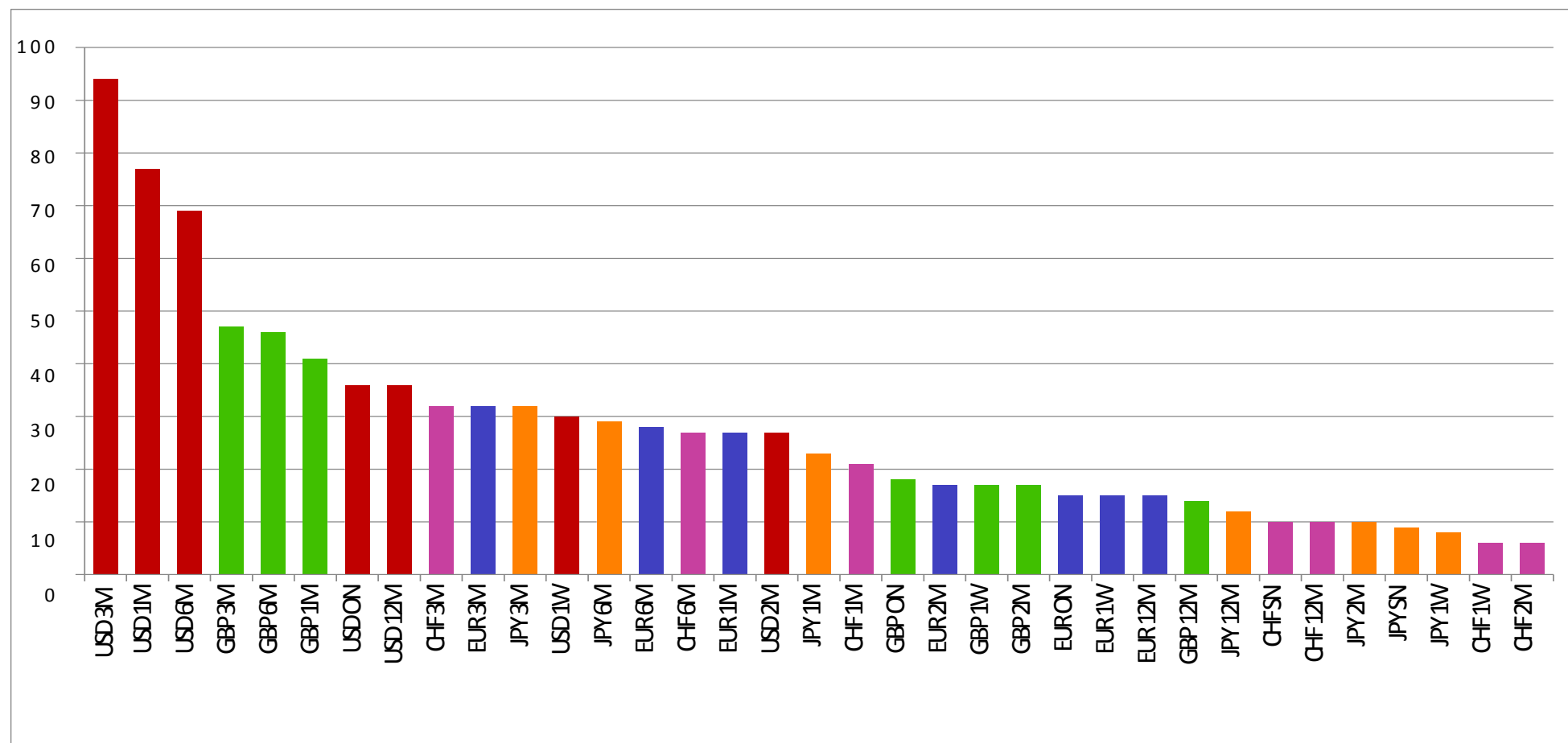
ICE LIBOR USER SURVEY

SURVEY QUESTION 1

“IBA would like to understand which LIBOR currency and tenor pairs you and/or your organisation use the most and for which you would like to see IBA work to seek an agreement with globally active banks to support publication after 2021. Please select up to a maximum of 17 currency and tenor pairs.”

ICE LIBOR USER SURVEY

NUMBER OF RESPONDENTS SELECTING EACH LIBOR CURRENCY AND TENOR PAIR

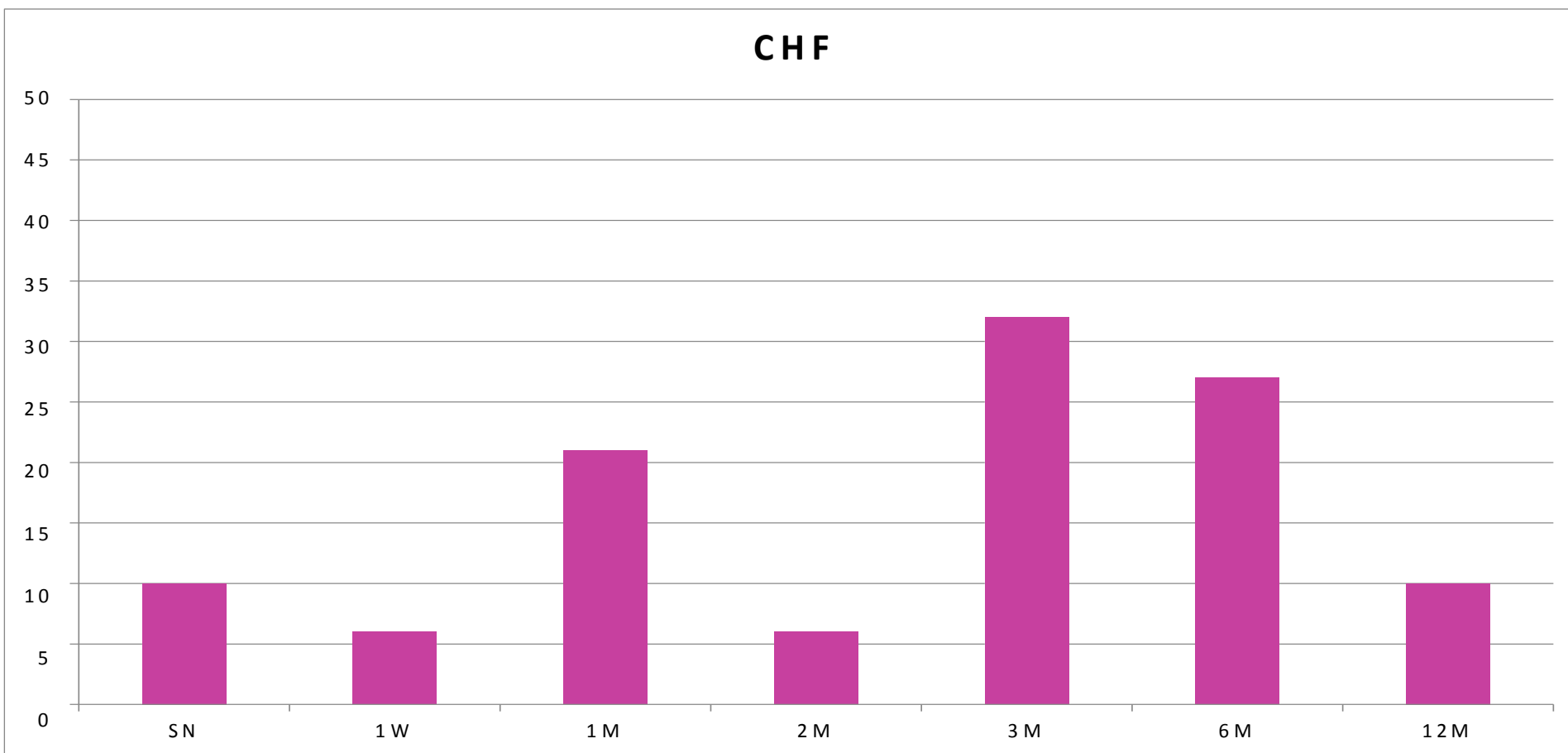


Total Responses Received: 109

■ USD ■ GBP ■ EUR ■ CHF ■ JPY

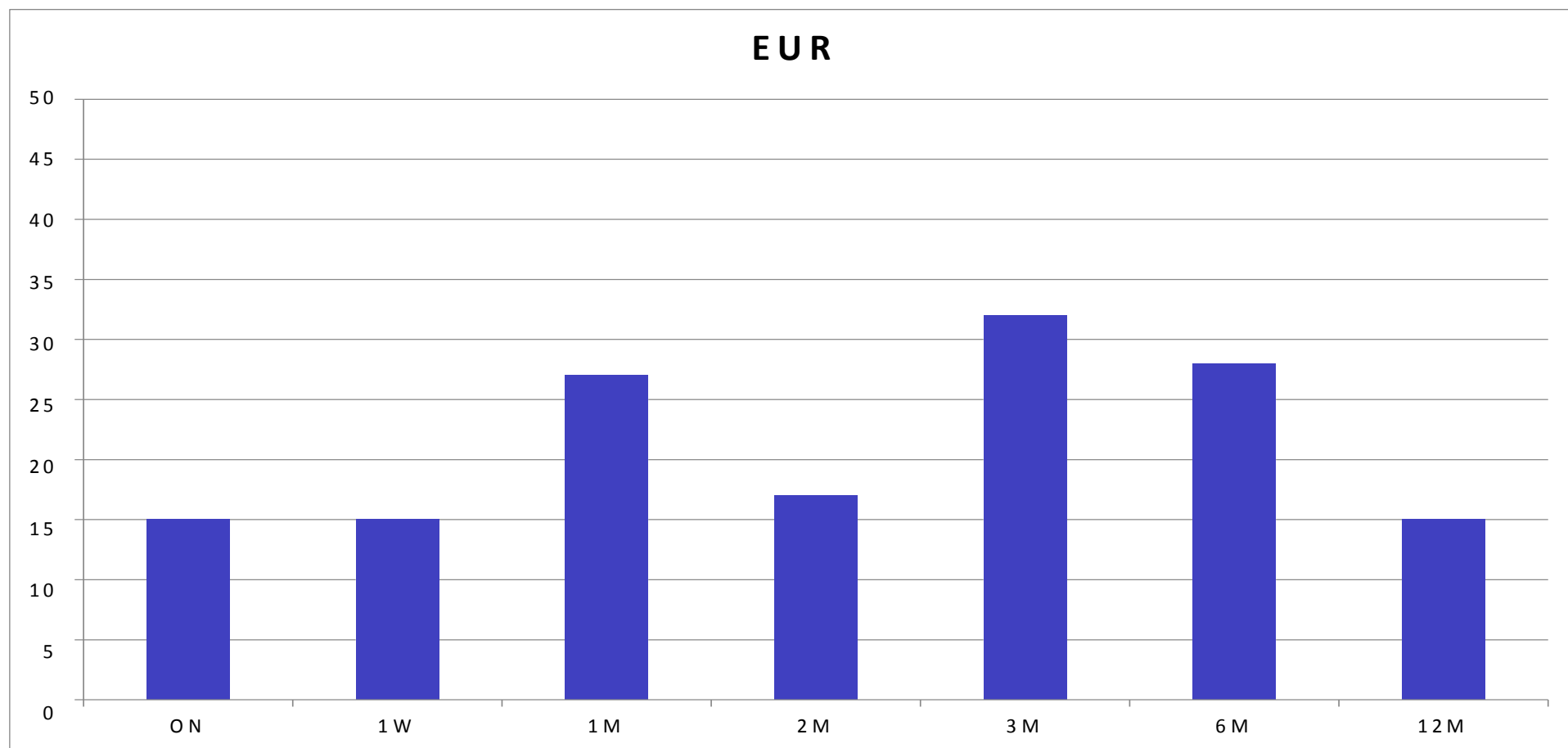
ICE LIBOR USER SURVEY

NUMBER OF RESPONDENTS SELECTING LIBOR CURRENCY AND TENOR PAIRS : CHF



ICE LIBOR USER SURVEY

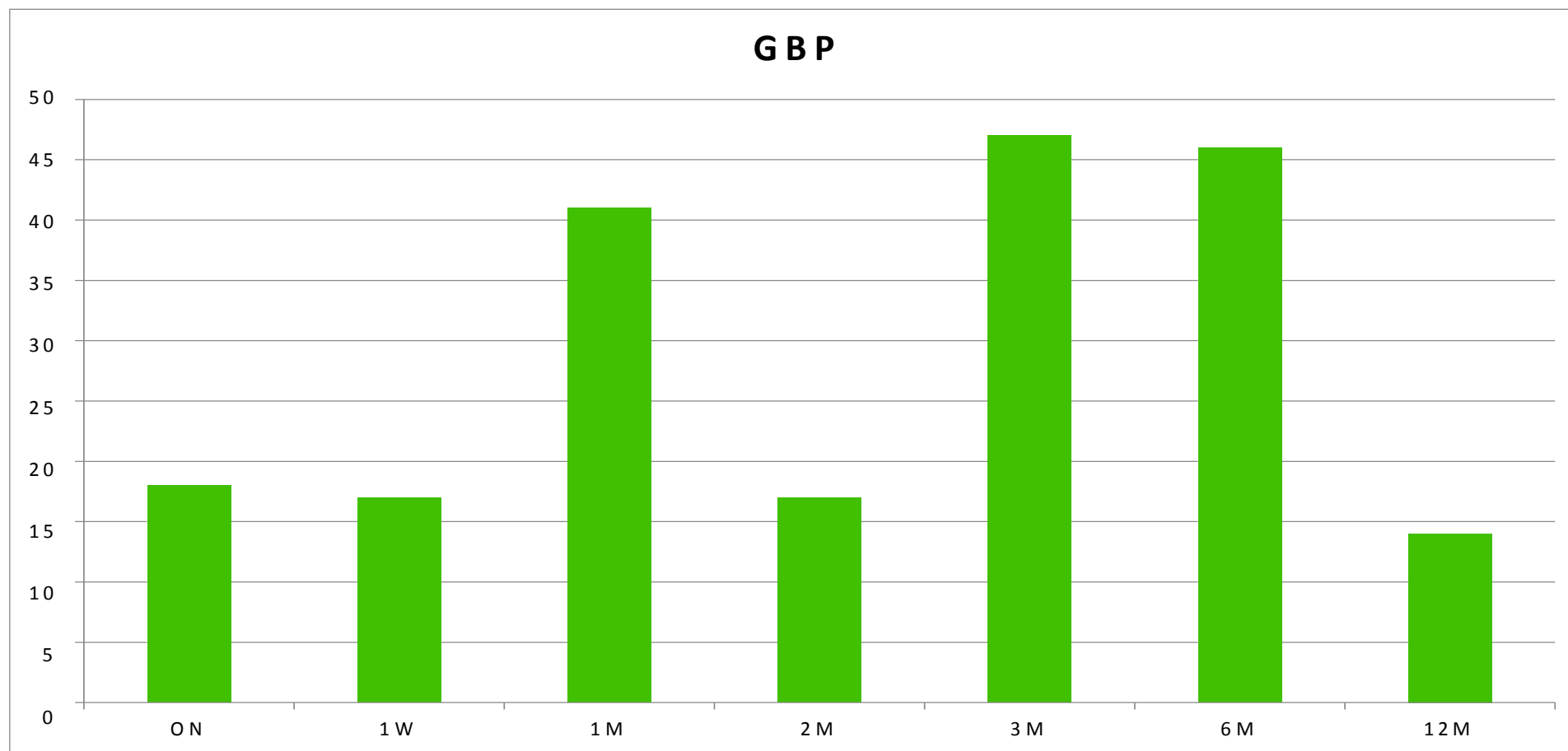
NUMBER OF RESPONDENTS SELECTING LIBOR CURRENCY AND TENOR PAIRS : EUR¹



¹ The survey noted that it related to EUR LIBOR as administered by IBA and not EURIBOR as administered by the European Money Markets Institute (EMMI)

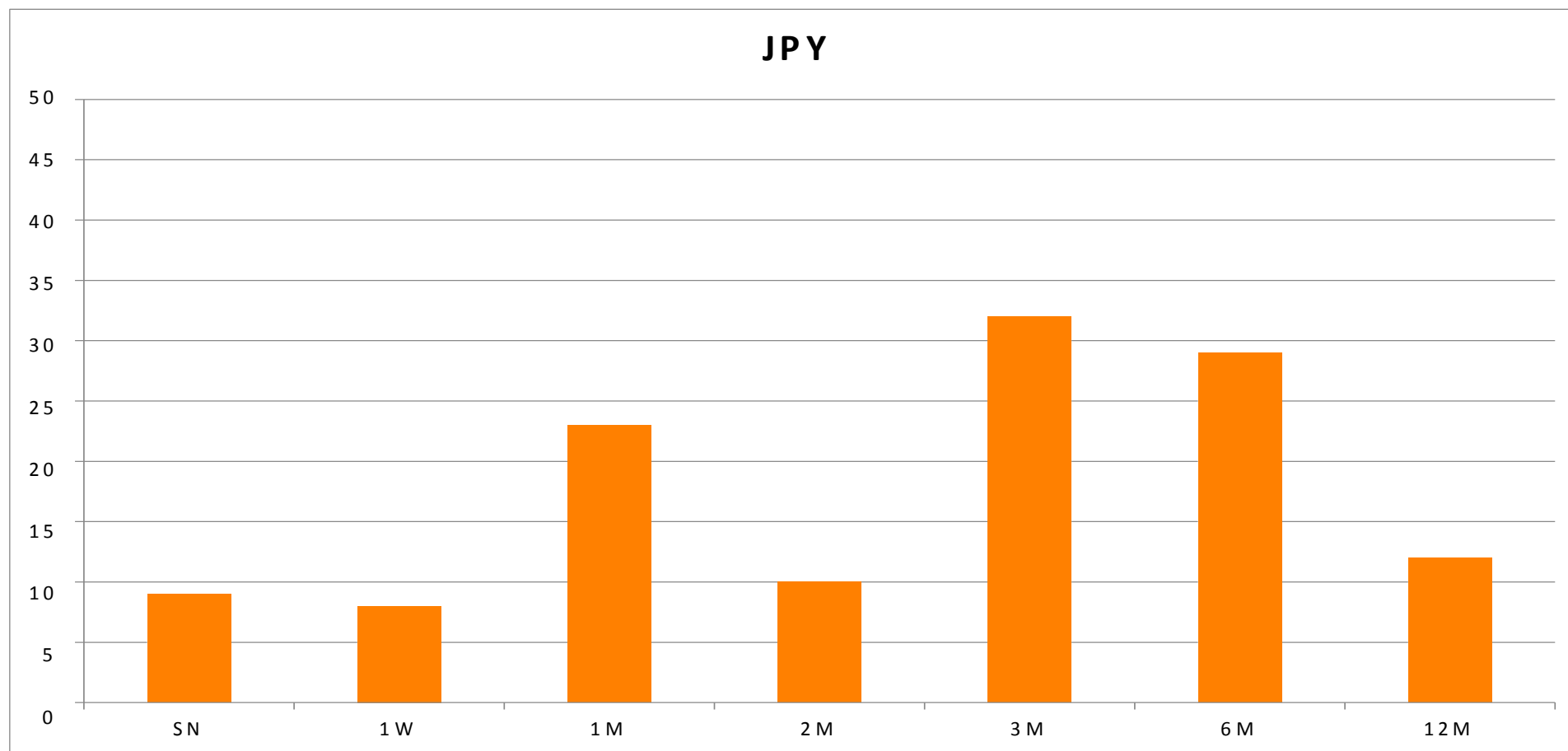
ICE LIBOR USER SURVEY

NUMBER OF RESPONDENTS SELECTING LIBOR CURRENCY AND TENOR PAIRS : GBP



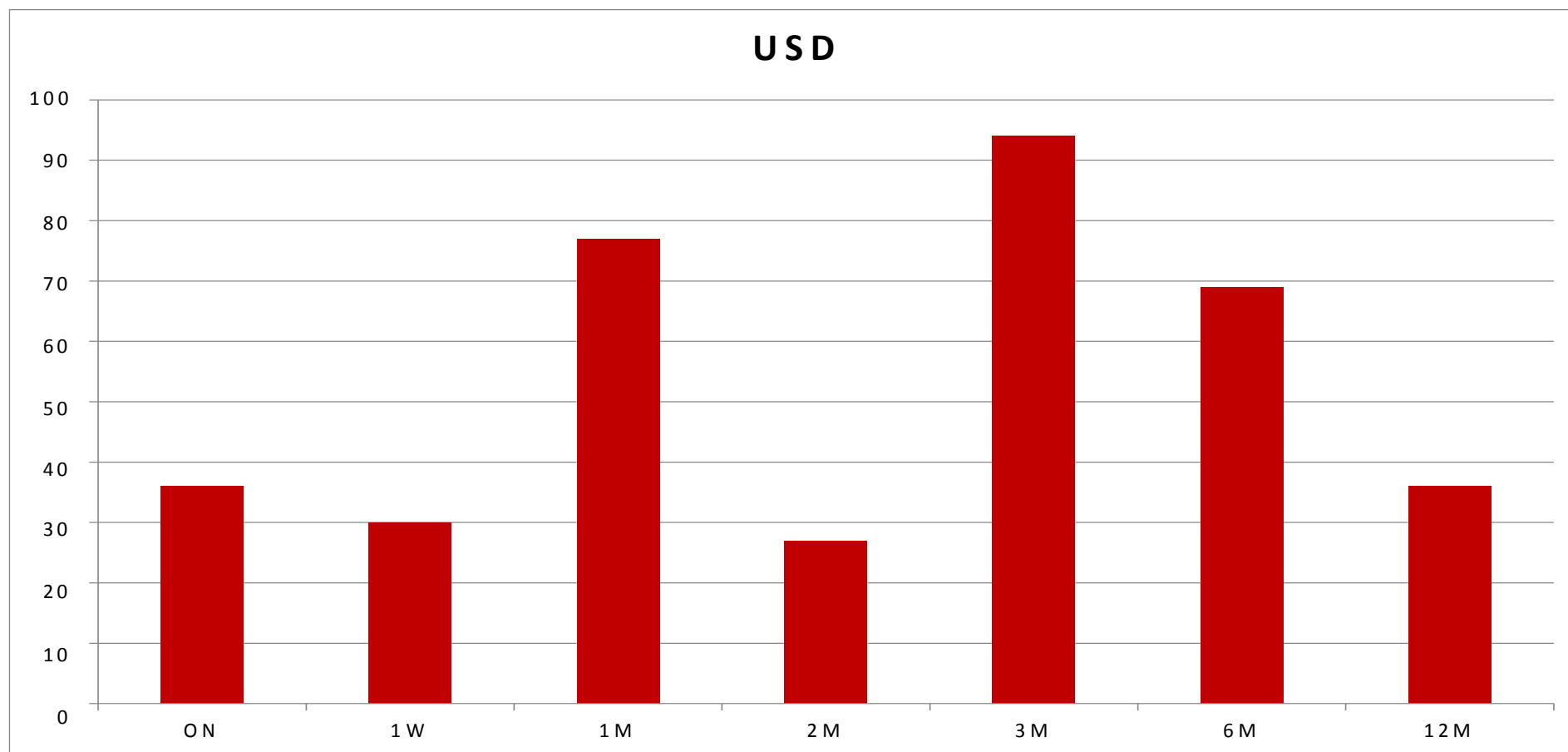
ICE LIBOR USER SURVEY

NUMBER OF RESPONDENTS SELECTING LIBOR CURRENCY AND TENOR PAIRS : JPY



ICE LIBOR USER SURVEY

NUMBER OF RESPONDENTS SELECTING LIBOR CURRENCY AND TENOR PAIRS : USD



ICE LIBOR USER SURVEY

SURVEY QUESTION 2

“Please set out the main uses of the currency and tenor pairs you use the most.

Where possible, please also provide an estimated notional amount (US\$ equivalent) for your outstanding contracts referencing LIBOR today.”

ICE LIBOR USER SURVEY

USAGE TYPE/OUTSTANDING NOTIONAL AMOUNT RESPONSES FOR EACH SELECTED LIBOR CURRENCY AND TENOR COMBINATION¹

	<\$10mm	\$10mm-\$50mm	\$50mm-\$100mm	\$100mm-\$500mm	\$500mm-\$1bn	\$1bn-\$10bn	\$10bn-\$50bn	>\$50bn	N/A	Total
Capital/perpetual securities			4	3	1					8
Cash flow discount rates	3	10	4	2	1			1		21
Cleared OTC derivatives	6	2	2	2	2	9	8	16	16	63
Corporate lending and leasing (including syndicated loans)	47	40	24	83	21	46	16	7	69	353
Exchange traded derivatives	36	1	7	3		1		1		49
Floating rate notes	2	4	3	9	5	16	2	4		45
Inter/intra-company loans	1		1	2	1	2				7
Internal risk management	29									29
Market analysis (e.g. valuations, internal transfer pricing)	4				3	2	2			11
Multiple uses (e.g. corporate lending and cleared OTC derivatives)	4			4	3	9	6	59	50	135
Other (Please specify in 'Additional Information' box)				3		4		1	26	34
Retail products (e.g. consumer loans, credit cards, mortgages, investment products)	5	1	5	5	1	5	2	1		25
Securities lending	3		1	1						5
Securitization structures (e.g. Mortgage Backed Securities, Asset Backed Securities)	7	2	10	9	5	15		1		49
Uncleared OTC derivatives	20	20	7	18	5	33	7	1	8	119
All Currency/Tenors Total	167	80	68	144	48	142	43	92	169	953

¹ Survey respondents were asked to provide the main use and estimated outstanding notional amount for each currency and tenor combination they selected in question one. Therefore, multiple uses/notional amounts may have been selected by each respondent.

Risk Free Rates (GBP)

ICE Term RFR Portal

- Launched: October 10th, 2018
 - <https://www.theice.com/marketdata/reports/244>
 - Published daily (approx. 11:55am and 14:15pm GMT)
 - 3,720 unique PC / terminal views to date
- Overnight Risk Free Rates (RFR) for select currencies as published: GBP, USD, JPY and EUR (TBD)
- Realised interest rates over a one, three and six month time period:
 - Simple Average, and
 - Compounded Average using a methodology that mirrors the formula in 2006 ISDA Definitions
- Preliminary indicative forward-looking term settings:
 - GBP at this time
 - Futures Derived only (SONIA 1M Settlement Price)
 - Indication of a desire to produce swap-based forward-looking SONIA rates
- White Paper
 - www.theice.com/publicdocs/IBA_ICE_Term_Risk_Free_Rates_October_2018.pdf

ICE Term RFR Portal – GBP (04 MAR 2019)

Report Date

04-Mar-2019



Submit

ICE Term Risk Free Rates (RFR) Portal

[Export to Excel](#) [Show Methodology](#)

04-Mar-2019

Currency	RFR Benchmark	Last Setting (%)	Publication Date	Publication Time (London Time)
GBP	SONIA	0.7057	04-MAR-19	09:00
USD	SOFR	2.3800	04-MAR-19	13:00
JPY	TONA	-0.0490	04-MAR-19	01:00
EUR	ESTER	-	-	-

GBP

	ICE RFR - Forward Looking		ICE RFR - Realised	
	Futures Derived (%)	Swaps Derived (%)	Average (%)	Compounded in Arrears (%)
1 Month	0.7106	-	0.7063	0.7065
3 Months	0.7145	-	0.7048	0.7054
6 Months	0.7328	-	0.7030	0.7042
Last Published (London Time)	04-MAR-19 11:56	-	04-MAR-19 11:56	04-MAR-19 11:56

ICE Term RFR Portal – GBP (04 MAR 2019, TEST PAGE)

Report Date

04-Mar-2019



Submit

ICE Term Risk Free Rates (RFR) Portal

[Export to Excel](#) [Show Methodology](#)

04-Mar-2019

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JPY	TONA	-0.0490	04-MAR-19	01:00
EUR	ESTER	-	-	-

GBP

	ICE RFR - Forward Looking		ICE RFR - Realised		Compounded in Arrears (%) with 5 business days lag*
	Futures Derived (%)	Swaps Derived (%)	Average (%)	Compounded in Arrears (%)	
1 Month	0.7106	-	0.7063	0.7065	0.7057
3 Months	0.7145	-	0.7048	0.7054	0.7050
6 Months	0.7328	-	0.7030	0.7042	0.7041
Last Published (London Time)	04-MAR-19 11:56	-	04-MAR-19 11:56	04-MAR-19 11:56	04-MAR-19 11:56

Sterling Risk Free Rates - Benchmarks

Realised SONIA Rates

- IBA expects to make available realised SONIA settings for contractual use on an on-going basis from 01 July 2019:
 - One, three and six month settings
 - Simple average and compounded, rounded to four decimal places
 - UK business days
 - Spot and with a five business day lag
- IBA will use the identical publication and distribution technology currently used for GBP LIBOR rates:
 - Direct to end users through a FTP
 - Data provided to all major data redistributors
- Publication time to be determined. Either:
 - Shortly after the Bank of England publishes SONIA rates, or
 - Concurrent with GBP LIBOR's publication

Sterling Risk Free Rates - Benchmarks

Forward-Looking Term SONIA Rates

- IBA is committed to the development of a Forward Looking SONIA Reference Rate in accordance with:
 - Principles laid out by the FSB / OSSG,
 - Goals put forth by the Sterling Risk Free Rates Working Group, and
 - The BMR (the European Union benchmarks regulation)
- IBA is working in coordination with the Sterling Risk Free Rates Working Group and the relevant Sub-groups
- IBA will leverage existing infrastructure (e.g. ICE Term RFR Portal) and available benchmark methodologies (e.g. ICE Swap Rate) to be able to produce term settings that are robust and have sufficient redundancies to ensure daily publication

Sterling Risk Free Rates - Benchmarks

Suggested Forward-Looking Term SONIA Rates Methodology

Step 1 : SONIA OIS - Firm Quotes

Instrument	Methodology	Input Data
SONIA Overnight Indexed Swaps	Similar to ICE Swap Rate	Firm Bid and Offer quotes from CLOB of Regulated MTFs

Fall-backs:

Step 2 - If Step 1 Not Possible : SONIA Futures - Firm Quotes

Instrument	Methodology	Input Data
SONIA Futures	Collect futures and SONIA input data and apply step function model ¹	Firm Bid and Offer quotes from Regulated Futures Exchanges

Step 3 - If Step 2 Not Possible : SONIA Futures - Settlement Price

Instrument	Methodology	Input Data
SONIA Futures	Collect settlement futures prices and SONIA input data and apply step function model	Previous day settlement price from Regulated Futures Exchanges and SONIA overnight rates

If Steps 1 to 3 do not produce a rate, IBA will republish the previous day's rate(s)



US Dollar ICE Bank Yield Index

Credit Sensitive Interest Rate Benchmarks

Options under consideration for lending contracts

1. Secured Overnight Funding Rate (SOFR) plus a spread adjustment that would become applicable during “periods of stress”:
 - Either SOFR on a stand alone basis or an implied term SOFR rate, plus a conditional
 - Spread adjustment to be determined by either a market protocol or bi-lateral negotiation between borrowers and lenders
2. The Bank Yield Index:
 - Proposed interest rate benchmark that measures unsecured credit yields of global banks in the tenors most widely used in lending contracts (i.e. one, three and six months)
 - Calculated daily based upon transactional data referencing unsecured bank obligations
1. Hybrid methodology:
 - Implied term SOFR settings for the tenors most widely used in lending contracts, plus a
 - Credit spread determined daily based upon transactional “spread” data referencing unsecured bank obligations

SOFR Plus a Spread Adjustment

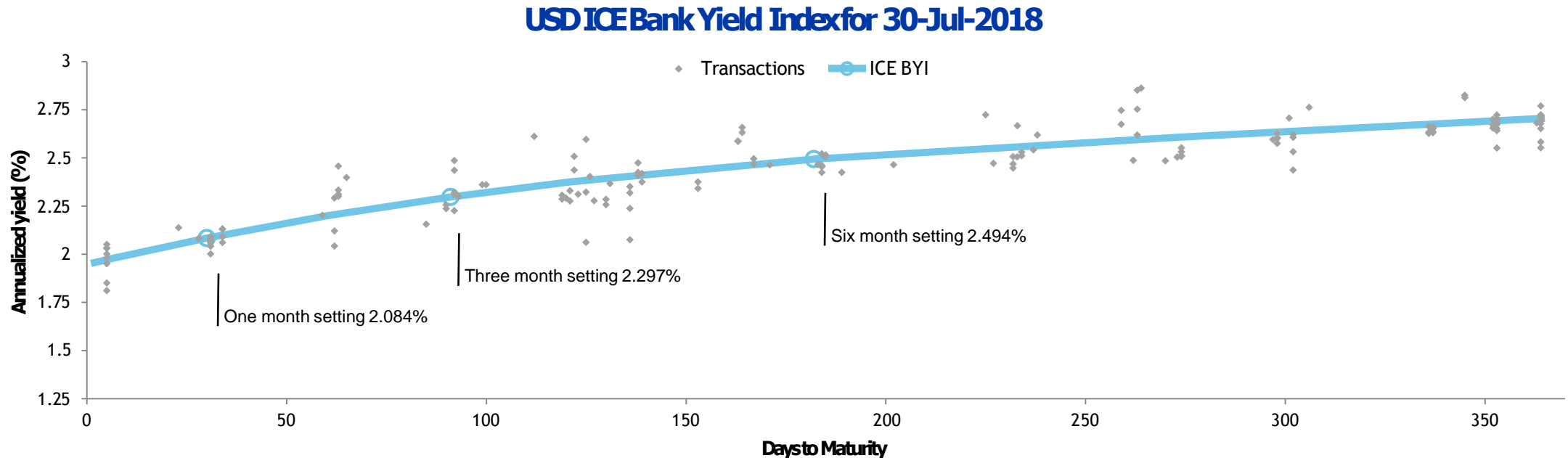
- Lending contracts would incorporate a two tier pricing framework:
 - In periods of economic and/or market stability loan pricing would be:
 - SOFR (the overnight rate or an implied term rate, if available), plus a
 - Credit spread, specific to the borrower
 - In periods of economic and/or market “stress” loan pricing would be:
 - SOFR, plus a
 - Credit spread, specific to the borrower, plus an
 - Adjustment Spread to account for increased bank funding cost
- The trigger event for the inclusion of an Adjustment Spread could either be:
 - Market standard protocol, and/or
 - Bilaterally negotiated at the inception of a lending agreement

US Dollar ICE Bank Yield Index

- The Bank Yield Index was developed to measure average unsecured bank yields in the money markets for the term settings (one, three and six months) most widely used in lending contracts
- The Index is calculated using eligible transactional input data representing short-term wholesale, U.S. dollar unsecured investment yields in respect of large banks:
 - Primary market funding transactions (e.g. eligible bank deposits, CP, CDs)
 - Secondary market bond transactions (e.g. trading of eligible short-dated bank bonds)
- IBA believes the Index has the potential to be an attractive replacement rate for USD LIBOR in funded and un-funded (e.g. revolvers) lending obligations:
 - Unsecured pricing index referencing a diverse set of banks
 - Forward-looking term settings
- To date the Bank Yield Index has shown a close correlation with other benchmarks that seek to incorporate the short-term, unsecured credit risk associated with financial institutions

Constructing the Bank Yield Index

Example calculations

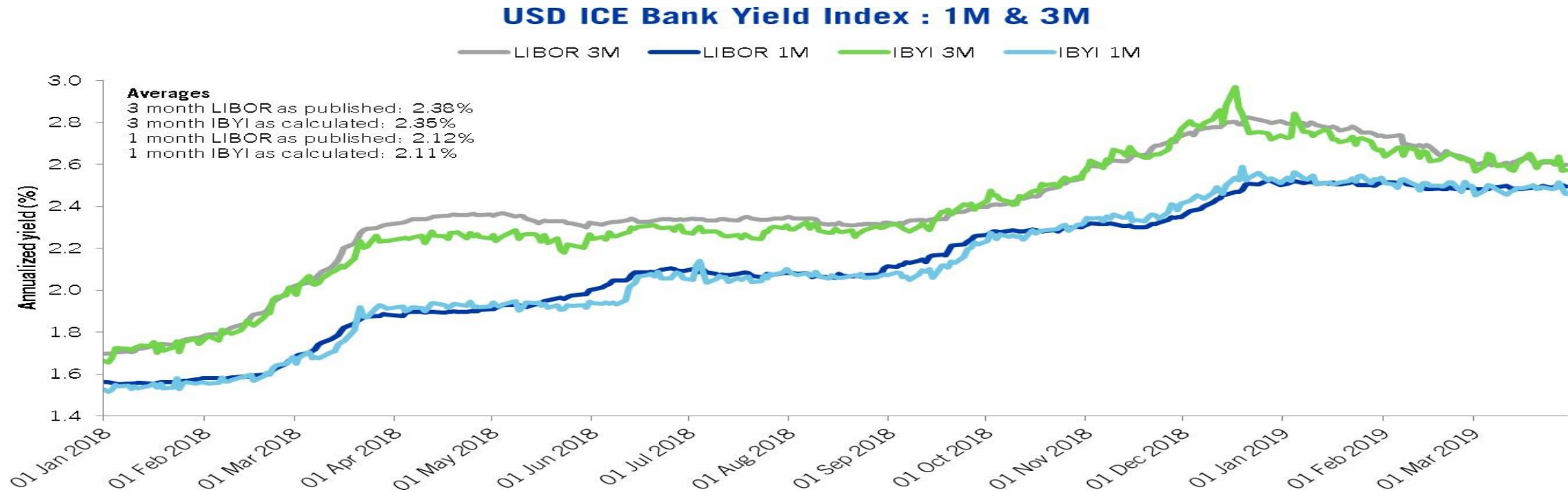


- Primary and secondary market transaction data points are collected daily in order to construct a credit-sensitive yield curve, using a third order polynomial regression¹
- One month, three months and six months Index settings are then determined from the yield curve at designated maturity points²

¹ Regression method and outlier treatment are subject to refinement following stakeholder feedback

² Where fewer data points than a defined target threshold are available on a given day for a publication tenor (i.e. one, three, or six months), data points from previous days (maximum of five days) will be incorporated into the curve. If there are still insufficient data points (using up to five days' data points), a contingency rate will be published based on the last rate derived using transaction data points and the standard methodology, adjusted for movements in risk free reference rates (e.g. OIS swaps, US Treasury yields, term SOFR [if available]).

US Dollar Bank Yield Index – Testing Data

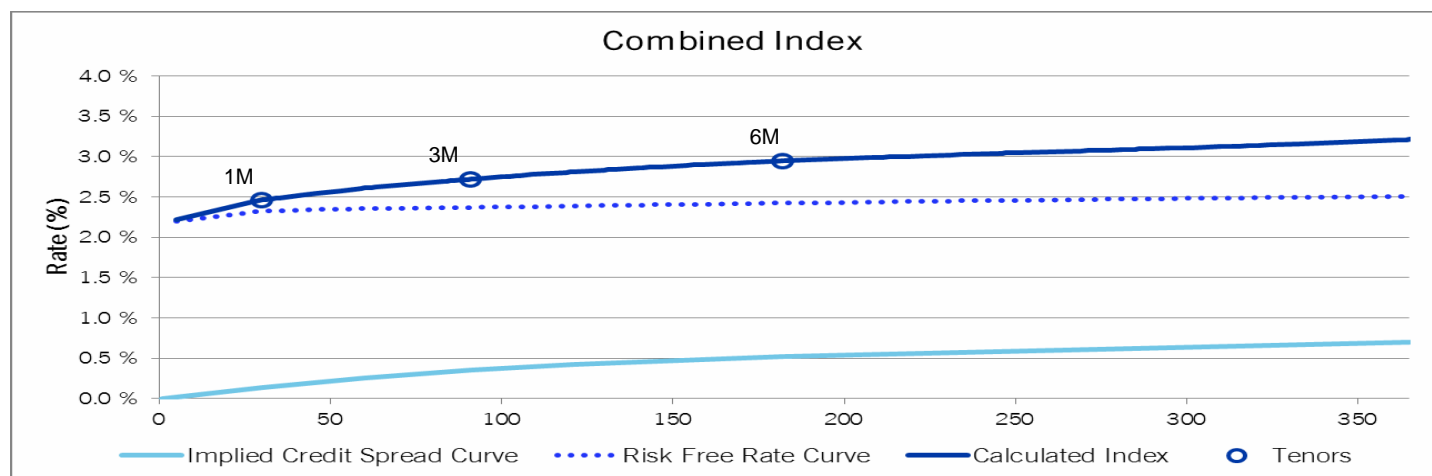
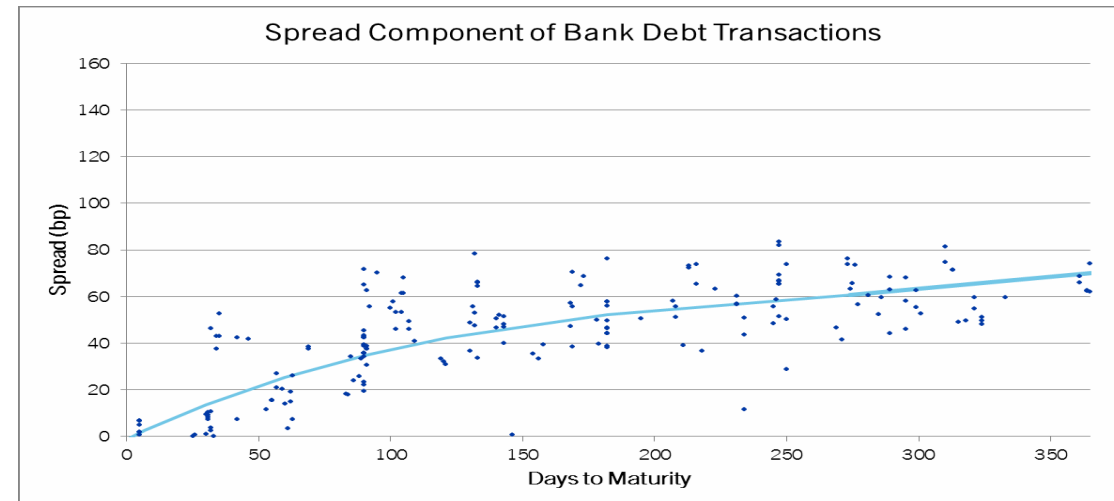
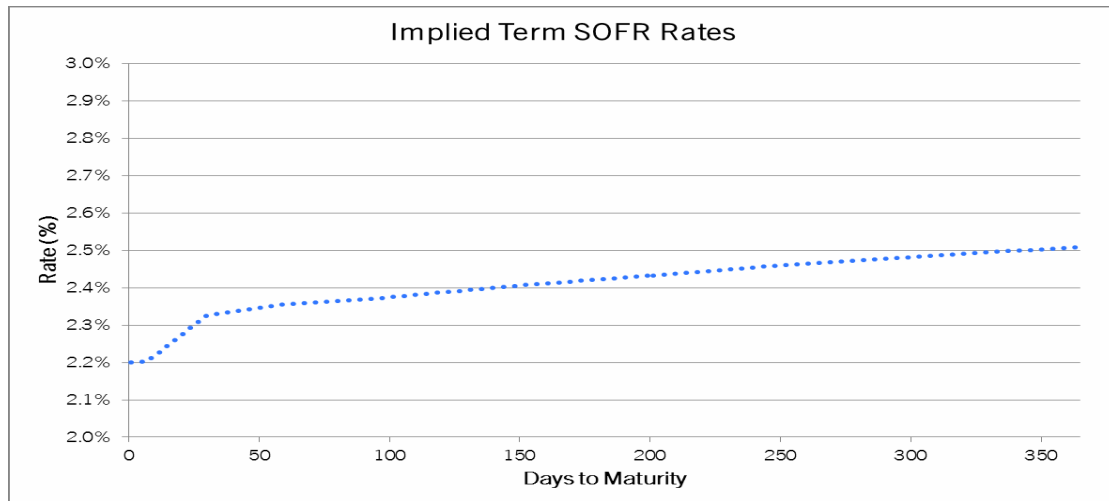


- Preliminary testing results do not exclude any “outlier” data (i.e. there is no trimming of data points far from the average results)
- IBA is seeking feedback from market participants¹ on how to approach “outlier” data

¹ IBA published a white paper introducing the Bank Yield Index on January 24, 2019. See feedback questions in the white paper.

Hybrid Methodology

Leveraging implied term SOFR rates and credit spread data to produce an index



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Data and outputs relating to the ICE bank yield index and ICE term RFR portal are provided for information and illustration purposes only, might not be accurate or reliable and may not be used for any other purpose. In particular, they are not currently intended for use as, and IBA expressly prohibits their use as, an index by reference to which the amount payable under a financial instrument or a financial contract, or the value of a financial instrument, is determined, or as an index that is used to measure the performance of an investment fund with the purpose of tracking the return of such index or of defining the asset allocation of a portfolio or of computing the performance fees. Such outputs should not be used as a benchmark within the meaning of the EU Benchmarks Regulation or otherwise.

The ICE bank yield index methodologies disclosed in this document are subject to changes in response to feedback from market participants and other stakeholders and IBA's further development work, and might alter the information and data shown in this document. There is no guarantee that IBA will continue to test the 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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