



بنك الإمارات دبي الوطني
Emirates NBD

Interest Rates 25 November 2018

Anita Yadav
Head of Fixed Income Research
+971 4 230 7630
anitay@emiratesnbd.com

From LIBOR to SOFR

After years of concerns relating to the LIBOR's vulnerability to manipulation, the UK Financial Conduct Authority has decided that it will no longer collect LIBOR quotes from participating banks beyond 2021. Consequently, the most commonly used reference rate in global financial markets, the 3m USD LIBOR, along with other LIBOR tenures will be phased out by the end of 2021.

Following months of due diligence, in June 2017, the Alternative Reference Rate Committee (ARRC) selected the Secured Overnight Financing Rate (SOFR) for USD derivatives and other financial contracts as its preferred alternative to the USD LIBOR. Beginning April 3, 2018, SOFR is now published each business day by the Federal Reserve Bank of New York in cooperation with the U.S. Treasury Department's Office of Financial Research.

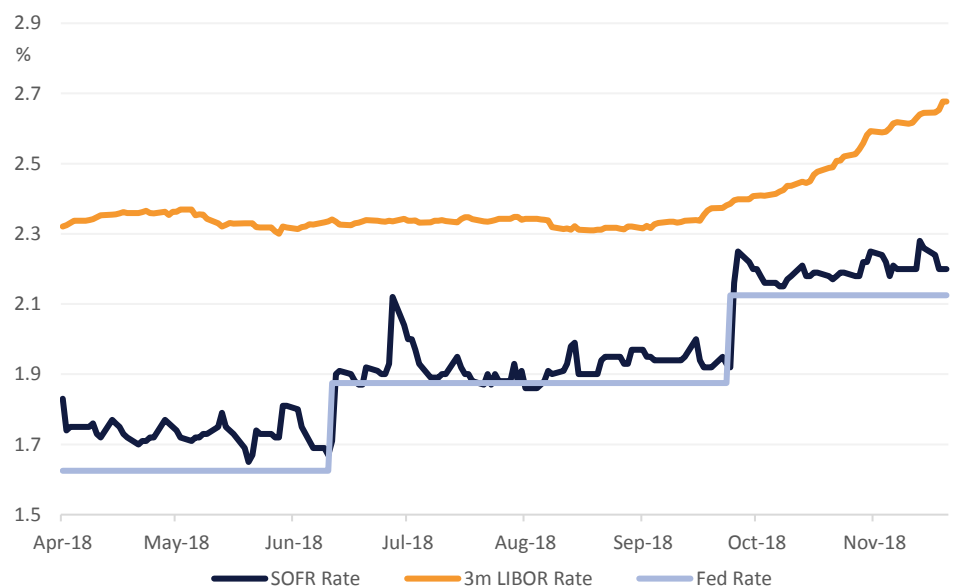
Why the Change?

LIBOR rates are calculated based on quotes submitted by leading international banks everyday based on their best estimate of their funding costs. In most instances, LIBOR is based on expert judgment since transactions involving wholesale interbank borrowings have substantially reduced in the post-financial-crisis-era as a result of reforms to banking and money market funds regulations. On average less than 30% of submissions are estimated to be based on actual transactions.

In absence of large interbank transactions, LIBOR estimates that banks submit are mostly based on a theoretical exercise. LIBOR's reputation has been tarnished by several high profile scandals involving banks that possibly engaged in manipulating their submitted LIBOR estimates in order to maximize profit on their own LIBOR based derivative positions. Consequently a need was felt to find a more robust reference rate.

SOFR, an overnight rate based on US treasury repo transactions, is seen to be more vigorous as it meets the key principle that benchmark rates should be "anchored by observable transactions," rather than based on so-called "expert judgment" by the banks. SOFR daily trading activity is at around \$800 billion, which is about 1,500 times daily LIBOR transaction volume.

SOFR is closer to the Fed Fund Target Rate



Source: Bloomberg, Emirates NBD Research

LIBOR – SOFR: Key differences

The key differences between LIBOR rates and the SOFR rate are as tabulated below.

	LIBOR	SOFR
Full name	London Interbank Offered Rate	Secured Overnight Financing Rate
Collateral	Unsecured	Secured against US treasury securities.
Tenures	Seven tenures ranging from overnight to 12 months across five currencies.	Currently only overnight. Most likely monthly and quarterly rates will eventually proliferate in the SOFR market too. 1m and 3m SOFR futures contracts are already trading on CME since May 2018.
Managing entity	Set in London, managed by the UK Financial Conduct Authority, published by Reuters.	Set in New York, managed by the Federal Reserve Bank of New York.
Existence	In existence for over 30 years. To be phased out by end 2021.	Commenced on April 3, 2018.
Calculating methodology	Set by averaging the banks' submission of best estimate of their borrowing costs.	Calculated using actual transactions in the US treasuries repo market.
Adoption	Circa \$370 trillion worth of floating rate securities and derivative transactions are estimated to be using LIBOR as their reference rate.	So far only a handful of issuers (rough estimate 700 bonds as at mid Oct 2018) have used it as benchmark reference rate. Uptake is likely to increase after Fannie Mae and the World Bank recently issued securities with SOFR as reference rate.
Currencies	Exists in five currencies	SOFR is for USD only.

Since 3m LIBOR rate is based on unsecured transactions, it has to reflect the counterparty credit risk premium whereas SOFR is nearly risk-free rate based on repo

financing of the US treasury securities. Consequently 3m LIBOR rate tend to be higher than SOFR rate.

Although LIBOR has several tenures ranging from overnight to 12 months, the 3m LIBOR is the most commonly used benchmark. In contrast SOFR is only overnight rate. Given the tenure difference, 3m LIBOR reference rate will generally be higher than the SOFR rate though only by few basis points.

The uptake of SOFR may pick up pace because a SOFR based floating rate security would likely have lower coupon and therefore lower cost for the issuer than a LIBOR referenced security.

Market Impact

The majority of existing exposures to LIBOR are slated to mature before 2022, but not all. According to the New York Fed, in the U.S., approximately \$36 trillion in notional outstanding will not mature before LIBOR is set to end, assuming there are no new LIBOR-based issuances. While most of that exposure is in interest rate derivatives, longer-dated positions in other asset classes are sizeable, such as an estimated \$4.7 trillion in consumer and business loans.

There are many floating rate bond investments in emerging markets that have maturity beyond the planned phase out of LIBOR in 2021. There is no clarity on the mechanism for adjusting for change in the reference rate. This uncertainty will likely cause liquidity squeeze and bid-offer spread widening on longer tenured floating rate instruments. Also competition from SOFR referenced security may cause a fall in demand for LIBOR referenced ones as phasing out date approaches which in turn could cause further price erosion of the existing LIBOR referenced floating rate notes.

SOFR is only an overnight rate and could be volatile and therefore corporations that are used to borrowing for a three or six months terms will probably need to engage in more interest rate hedging to lock their rates.

Replacement of LIBOR rates for other currencies

Regulators have pushed internationally to find alternatives to Libor and its equivalents. SOFR has been slow to make its mark. A British committee last year selected SONIA (Sterling Overnight Interbank Average Rate), an unsecured overnight lending rate, as an alternative to sterling-based Libor and Japan selected TONAR (Tokyo Overnight Average Rate) as an alternative to yen Libor, also an unsecured rate. Switzerland selected SARON (Swiss Average Rate Overnight), a collateralized rate based on the Swiss repo market. The European Central Bank is developing a daily euro unsecured overnight index rate.

Interest Rate Forecasts

USD Swaps Forecasts					Forwards		
	Current	3M	6M	12M	3M	6M	12M
2y	3.00	3.30	3.35	3.40			
10y	3.11	3.43	3.45	3.35			
2s10s (bp)	11	13	10	-5			
US Treasuries Forecasts					US Treasuries Forecasts		
2y	2.81	3.10	3.15	3.20			
10y	3.03	3.35	3.35	3.20			
2s10s (bp)	22	25	20	0			
3M Libor					3M Libor		
3m	2.69	2.85	3.10	3.35			
3M Eibor					3M Eibor		
3m	2.82	3.00	3.25	3.55			
Policy Rate Forecasts							
	Current %	3M	6M	12M			
FED (Upper Band)	2.25	2.50	2.75	3.00			
ECB	0.00	0.00	0.00	0.25			
BoE	0.75	0.75	0.75	1.00			
BoJ	-0.10	-0.10	-0.10	-0.10			
SNB	-0.75	-0.75	-0.75	-0.75			
RBA	1.50	1.50	1.50	1.75			
RBI (repo)	6.50	6.50	6.50	6.75			
SAMA (reverse repo)	2.25	2.50	2.75	3.00			
UAE (1W repo)	2.50	2.75	3.00	3.25			
CBK (o/n repo rate)	2.25	2.50	2.75	3.00			
QCB (repo rate)	2.50	2.75	3.00	3.25			
CBB (o/n depo)	2.25	2.50	2.75	3.00			
CBO (o/n repo)	2.72	2.97	3.25	3.55			
CBE (o/n depo)	16.75	16.75	15.75	14.75			

Source: Bloomberg, Emirates NBD Research

Disclaimer

PLEASE READ THE FOLLOWING TERMS AND CONDITIONS OF ACCESS FOR THE PUBLICATION BEFORE THE USE THEREOF. By continuing to access and use the publication, you signify you accept these terms and conditions. Emirates NBD reserves the right to amend, remove, or add to the publication and Disclaimer at any time. Such modifications shall be effective immediately. Accordingly, please continue to review this Disclaimer whenever accessing, or using the publication. Your access of, and use of the publication, after modifications to the Disclaimer will constitute your acceptance of the terms and conditions of use of the publication, as modified. If, at any time, you do not wish to accept the content of this Disclaimer, you may not access, or use the publication. Any terms and conditions proposed by you which are in addition to or which conflict with this Disclaimer are expressly rejected by Emirates NBD and shall be of no force or effect. Information contained herein is believed by Emirates NBD to be accurate and true but Emirates NBD expresses no representation or warranty of such accuracy and accepts no responsibility whatsoever for any loss or damage caused by any act or omission taken as a result of the information contained in the publication. The publication is provided for informational uses only and is not intended for trading purposes. Charts, graphs and related data/information provided herein are intended to serve for illustrative purposes. The data/information contained in the publication is not designed to initiate or conclude any transaction. In addition, the data/information contained in the publication is prepared as of a particular date and time and will not reflect subsequent changes in the market or changes in any other factors relevant to their determination. The publication may include data/information taken from stock exchanges and other sources from around the world and Emirates NBD does not guarantee the sequence, accuracy, completeness, or timeliness of information contained in the publication provided thereto by or obtained from unaffiliated third parties. Moreover, the provision of certain data/information in the publication may be subject to the terms and conditions of other agreements to which Emirates NBD is a party.

None of the content in the publication constitutes a solicitation, offer or recommendation by Emirates NBD to buy or sell any security, or represents the provision by Emirates NBD of investment advice or services regarding the profitability or suitability of any security or investment. Moreover, the content of the publication should not be considered legal, tax, accounting advice. The publication is not intended for use by, or distribution to, any person or entity in any jurisdiction or country where such use or distribution would be contrary to law or regulation. Accordingly, anything to the contrary herein set forth notwithstanding, Emirates NBD, its suppliers, agents, directors, officers, employees, representatives, successors, assigns, affiliates or subsidiaries shall not, directly or indirectly, be liable, in any way, to you or any other person for any: (a) inaccuracies or errors in or omissions from the publication including, but not limited to, quotes and financial data; (b) loss or damage arising from the use of the publication, including, but not limited to any investment decision occasioned thereby. (c) UNDER NO CIRCUMSTANCES, INCLUDING BUT NOT LIMITED TO NEGLIGENCE, SHALL EMIRATES NBD, ITS SUPPLIERS, AGENTS, DIRECTORS, OFFICERS, EMPLOYEES, REPRESENTATIVES, SUCCESSORS, ASSIGNS, AFFILIATES OR SUBSIDIARIES BE LIABLE TO YOU FOR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES EVEN IF EMIRATES NBD HAS BEEN ADVISED SPECIFICALLY OF THE POSSIBILITY OF SUCH DAMAGES, ARISING FROM THE USE OF THE PUBLICATION, INCLUDING BUT NOT LIMITED TO, LOSS OF REVENUE, OPPORTUNITY, OR ANTICIPATED PROFITS OR LOST BUSINESS. The information contained in the publication does not purport to contain all matters relevant to any particular investment or financial instrument and all statements as to future matters are not guaranteed to be accurate. Anyone proposing to rely on or use the information contained in the publication should independently verify and check the accuracy, completeness, reliability and suitability of the information and should obtain independent and specific advice from appropriate professionals or experts regarding information contained in the publication. Further, references to any financial instrument or investment product is not intended to imply that an actual trading market exists for such instrument or product. In publishing this document Emirates NBD is not acting in the capacity of a fiduciary or financial advisor.

Emirates NBD and its group entities (together and separately, "Emirates NBD") does and may at any time solicit or provide commercial banking, investment banking, credit, advisory or other services to the companies covered in its reports. As a result, recipients of this report should be aware that any or all of the foregoing services may at times give rise to a conflict of interest that could affect the objectivity of this report.

The securities covered by this report may not be suitable for all types of investors. The report does not take into account the investment objectives, financial situations and specific needs of recipients.

Data included in the publication may rely on models that do not reflect or take into account all potentially significant factors such as market risk, liquidity risk and credit risk. Emirates NBD may use different models, make valuation adjustments, or use different methodologies when determining prices at which Emirates NBD is willing to trade financial instruments and/or when valuing its own inventory positions for its books and records. In receiving the publication, you acknowledge and agree that there are risks associated with investment activities. Moreover, you acknowledge in receiving the publication that the responsibility to obtain and carefully read and understand the content of documents relating to any investment activity described in the publication and to seek separate, independent financial advice if required to assess whether a particular investment activity described herein is suitable, lies exclusively with you. You acknowledge and agree that past investment performance is not indicative of the future performance results of any investment and that the information contained herein is not to be used as an indication for the future performance of any investment activity. You acknowledge that the publication has been developed, compiled, prepared, revised, selected, and arranged by Emirates NBD and others (including certain other information sources) through the application of methods and standards of judgment developed and applied through the expenditure of substantial time, effort, and money and constitutes valuable intellectual property of Emirates NBD and such others. All present and future rights in and to trade secrets, patents, copyrights, trademarks, service marks, know-how, and other proprietary rights of any type under the laws of any governmental authority, domestic or foreign, shall, as between you and Emirates NBD, at all times be and remain the sole and exclusive property of Emirates NBD and/or other lawful parties. Except as specifically permitted in writing, you acknowledge and agree that you may not copy or make any use of the content of the publication or any portion thereof. Except as specifically permitted in writing, you shall not use the intellectual property rights connected with the publication, or the names of any individual participant in, or contributor to, the content of the publication, or any variations or derivatives thereof, for any purpose.

YOU AGREE TO USE THE PUBLICATION SOLELY FOR YOUR OWN NONCOMMERCIAL USE AND BENEFIT, AND NOT FOR RESALE OR OTHER TRANSFER OR DISPOSITION TO, OR USE BY OR FOR THE BENEFIT OF, ANY OTHER PERSON OR ENTITY. YOU AGREE NOT TO USE, TRANSFER, DISTRIBUTE, OR DISPOSE OF ANY DATA/INFORMATION CONTAINED IN THE PUBLICATION IN ANY MANNER THAT COULD COMPETE WITH THE BUSINESS INTERESTS OF EMIRATES NBD. YOU MAY NOT COPY, REPRODUCE, PUBLISH, DISPLAY, MODIFY, OR CREATE DERIVATIVE WORKS FROM ANY DATA/INFORMATION CONTAINED IN THE PUBLICATION. YOU MAY NOT OFFER ANY PART OF THE PUBLICATION FOR SALE OR DISTRIBUTE IT OVER ANY MEDIUM WITHOUT THE PRIOR WRITTEN CONSENT OF EMIRATES NBD. THE DATA/INFORMATION CONTAINED IN THE PUBLICATION MAY NOT BE USED TO CONSTRUCT A DATABASE OF ANY KIND. YOU MAY NOT USE THE DATA/INFORMATION IN THE PUBLICATION IN ANY WAY TO IMPROVE THE QUALITY OF ANY DATA SOLD OR CONTRIBUTED TO BY YOU TO ANY THIRD PARTY. FURTHERMORE, YOU MAY NOT USE ANY OF THE TRADEMARKS, TRADE NAMES, SERVICE MARKS, COPYRIGHTS, OR LOGOS OF EMIRATES NBD OR ITS SUBSIDIARIES IN ANY MANNER WHICH CREATES THE IMPRESSION THAT SUCH ITEMS BELONG TO OR ARE ASSOCIATED WITH YOU OR, EXCEPT AS OTHERWISE PROVIDED WITH EMIRATES NBD'S PRIOR WRITTEN CONSENT, AND YOU ACKNOWLEDGE THAT YOU HAVE NO OWNERSHIP RIGHTS IN AND TO ANY OF SUCH ITEMS. MOREOVER YOU AGREE THAT YOUR USE OF THE PUBLICATION IS AT YOUR SOLE RISK AND ACKNOWLEDGE THAT THE PUBLICATION AND ANYTHING CONTAINED HEREIN, IS PROVIDED "AS IS" AND "AS AVAILABLE," AND THAT EMIRATES NBD MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, AS TO THE PUBLICATION, INCLUDING, BUT NOT LIMITED TO, MERCHANTABILITY, NON-INFRINGEMENT, TITLE, OR FITNESS FOR A PARTICULAR PURPOSE OR USE. You agree, at your own expense, to indemnify, defend and hold harmless Emirates NBD, its Suppliers, agents, directors, officers, employees, representatives, successors, and assigns from and against any and all claims, damages, liabilities, costs, and expenses, including reasonable attorneys' and experts' fees, arising out of or in connection with the publication, including, but not limited to: (i) your use of the data contained in the publication or someone using such data on your behalf; (ii) any deletions, additions, insertions or alterations to, or any unauthorized use of, the data contained in the publication or (iii) any misrepresentation or breach of an acknowledgement or agreement made as a result of your receiving the publication.