Economics

DBS Focus

The ~~Libor~~ SOFR transition

Group Research

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- The transition towards SOFR, from Libor, is well underway
- Users of cash products / derivatives based off Libor need to be aware of the upcoming changes
- Some kinks, especially volatility, in the SOFR need to be addressed
- The Libor changes are also impacting Singapore. Watch for further details on the new Sibor in 2H19

Rates: The ~~Libor~~ SOFR transition

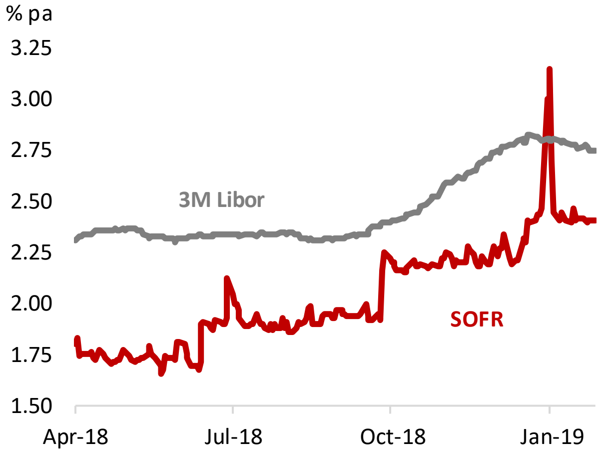
The transition towards the Secured Overnight Funding Rates (SOFR) as the preferred USD benchmark borrowing rate (away from Libor) is underway. Libor submissions will be voluntary after 2021 and there is a need to transit towards SOFR over the coming few years. Unfortunately, awareness in Asia may still be lacking. With many instruments referencing Libor having lives beyond 2021, **there will a need for existing contracts to consider the possibility that Libor will cease, and necessary fall-back provisions catered for**. As a recap, the SOFR was put forth as a preferred rate as Libor no longer fulfils the criteria of being a transactions-based benchmark that is transparent with appropriate levels of governance. To put things into perspective, SOFR daily volume amounts to USD 750bn a day, compared to about a USD 1bn a day for Libor. Intuitively, **it makes more sense to have financial instruments reference a heavily transacted rate (SOFR)**, rather than a hypothetical rate (Libor), which is the case currently. The transition towards SOFR is spearheaded by the Alternative Reference Rates Committee (ARRC).

	Libor	SOFR
Administrator	ICE	NY Fed
Term	1M,3M etc	o/n
Secured/unsecured	unsecured	secured
Transactions	Interbank	Financial Institutions

SOFR vs Libor

There are key differences between the SOFR and Libor. SOFR is an overnight, collateralised rate that measures funding costs across the financial industry. Comparatively, Libor (as widely used) is a term, uncollateralised rate that inherently measures bank funding. For business-related purposes, it is probably most relevant to see how SOFR trades in relation to current USD rates. **Since April 2018 (when SOFR was introduced), the average spread of the SOFR over the 3M Libor is about -43bps.**

SOFR is more volatile than the 3M Libor



Source: Bloomberg, CEIC, DBS

Another way to view this would be via a spread over the interest on excess reserves (IOER) rate (a more relevant policy rate compared to the Fed funds rate). This average spread is close to zero. Broadly speaking, a reasonable spread over the SOFR can be derived once there are more data points. However, **the volatility of the SOFR will take getting used to.** Notably, there was a liquidity squeeze that brought the SOFR to 3.15% on 2nd January (almost 70bps in two working days). Longer-term 3M SOFR OIS fixed rate also exhibited volatility, with a spike of its own on 21st January. With repo rates (which SOFR are based off) susceptible to T-bill supply and regulatory constraints on banks' balance sheets (banks are typically less willing to extend balance sheet at the end of the calendar year), **there may be a further need by the authorities to smooth / cap these fluctuations.**

SOFR products
1M, 3M SOFR futures
SOFR OIS (1W to 50Y)
SOFR-linked floating rate notes (bonds)

Developments in SOFR-linked products

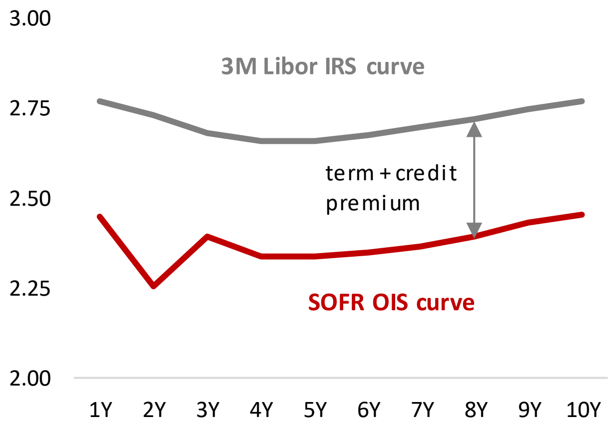
While imperfect, the SOFR remains the base case USD reference rate for the future. Developments have picked up on several fronts with SOFR futures and OIS already available. Volumes are still somewhat muted with open interest on 3M futures generally hovering below 20k contracts every day. The notional value in SOFR-linked swaps is also small (USD7bn by 1st Feb ytd) compared to Libor-linked swaps (USD14tn by 1st Feb ytd). Progress on the issuance front is more promising. A quick search on Bloomberg found 42 SOFR-linked bonds outstanding. Some of the largest players include the Federal Home Loan Banks, Well Fargo Bank, JP Morgan, Credit Suisse, with indications that the US Treasury may soon follow suit.

Cash products	Fallback Provision Waterfall
Floating rate notes, business loans and securitisation products	Term SOFR* plus spread Compounded SOFR plus spread Replacement Rate plus spread

*term SOFR to be announced in 1Q19

Fallback Provision For Derivatives	
Adjust term premium	Adjust credit premium
Current ref: 3M Libor New ref: SOFR + term premium + credit premium	

Libor swap curve vs SOFR OIS curve
3M Libor IRS curve



Source: Bloomberg

Implications for clients

The practical implications for clients lie with how existing documents handle the transition to SOFR (from Libor) and how new contracts will look. These can be split into two groups – **Cash products** (loans that reference Libor) and **Derivatives** that have a Libor leg (some of the more common derivatives include interest rate swaps, and cross currency basis swaps, spanning hedging and funding needs).

The ARRC has provided guiding principles for the fall-back language (see here) to ensure consistency across products. These lay out key definitions and a waterfall to select alternative rates and spreads that may be used when Libor is no longer published.

Under the waterfall provision, cash products will reference term SOFR (to be introduced) with a spread, failing which the compounded SOFR with spread would be used. For derivatives, the Libor would be replaced with the SOFR plus a term adjustment and a credit adjustment. **The simultaneous alignment across all business aspects - accounting, valuation, funding, hedging - to SOFR is ideal** to avoid SOFR-Libor mismatches.

Proposed Sibor Waterfall
Trasactions in wholesale market (deposits)
Transactions in related markets (SOR)
Expert judgement

The upcoming Sibor adjustment

The ibor transition will also affect Singapore. The Association of Banks in Singapore (ABS) has already finalised proposals on the evolution of Sibor (see here). A similar waterfall methodology is in place. In our view, **the key difference between the current Sibor calculations vs the new one lies with the upcoming inclusion of transactions in wholesale funding markets (institutional deposits).** The new Sibor will undergo a period of transitional testing in 2H19 before being rolled out around end-2019.

Sources: Bloomberg, ARRC, ISDA.org, CME group, Association of Banks in Singapore, DBS Group Research

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Sources: Data for all charts and tables are from CEIC, Bloomberg and DBS Group Research (forecasts and transformations).