

Overview of SOFR-based Activity Analysis for 2Q 2019

by

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A number of major currencies around the world are currently undergoing significant transitions in major rate benchmarks. As one example, a large and diverse set of US dollar denominated financial products currently reference the London Interbank Offer Rate (Libor), including residential and commercial mortgages, interest rate swaps, the Eurodollar futures contract, etc. Estimates have put the notional size of Libor-based markets in the hundreds of trillions of dollars.² Libor, introduced in the 1970s, aims to represent the average cost of unsecured borrowing between major banks; currently, Libor rates are published on a daily basis for five major currencies and are based on survey submissions by global commercial and investment banks. Starting with the financial crisis of '07-'09, however, and continuing through subsequent monetary policies that significantly increased bank reserves, interbank lending decreased dramatically. As a result, LIBOR became a much less meaningful indicator of money market transactions, and monitoring LIBOR submissions became much more difficult both for the marketplace and relevant regulators. This evolution made submission monitoring and verification much more difficult for both the marketplace as well as relevant regulatory agencies.

Over time, as the level of interbank lending continued to fall, the financial community realized a change was necessary. In recent years, a wide variety of jurisdictions (including the US, Europe and the UK), have done extensive work on identifying potential replacements for Libor and Libor-like (e.g. Tibor) rates; part of this process has been developing a plan for transitioning between the current rate and its identified replacement. Because of the complexity and size of Libor-based markets, the transition is both length and multi-staged. However, with the future of Libor after 2021 currently uncertain, the speed of transition is critical. For US-dollar based contracts, after comprehensive discussions, the financial community identified the Secured Overnight Financing Rate (SOFR) as the most appropriate and robust replacement rate. SOFR is based on the average cost of overnight US Treasury-based repurchase agreements (repo). With around \$750bn of activity per day in this underlying market, the rate represents actual borrowing conditions for a large subset of the financial network. Since spring 2018, the New York Federal Reserve, in coordination with the Office of Financial Research, has published the daily SOFR rate.

Though SOFR has now been developed, and has started to build up a historical time series, there is a separate question about which market participants choose to use it, and when. One of the first areas of major transition from USD-based Libor to SOFR has been in the area of derivatives, including interest rate futures and interest rate swaps markets. In 2018, the Chicago Mercantile Exchange (CME) listed

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² See, for instance, the study Commissioned by the FCA in evaluating Libor: [The Wheatley Review](#).

two futures contracts, (1-month SOFR and 3-month SOFR), which settle to the SOFR rate and are constructed similarly to their highly liquid Eurodollar futures contract, which references the Libor rate. Activity and positions in these SOFR futures contracts have progressively increased over the last year. Next year, in the second half of 2020, both CME and LCH plan to switch to SOFR as their discounting curve as well as the rate used to pay interest on cash collateral.

Parallel to this transition in SOFR futures, there have been some tentative initial steps into SOFR-based swap trading. Reports over the last year have noted that entities like the World Bank, Fannie Mae and MetLife have issued debt tied to SOFR, often hedging this debt with SOFR-linked swaps.³ Because US swap activity is required to be publicly reported, it is possible to calculate aggregate activity statistics using public information. For a number of quarters, ISDA has published a highly-informative global benchmark transition review, partially based on this public reporting.⁴ The tables in the attached Excel sheet provide some additional details on a specific subset of the global benchmark transition, specifically the transition for USD-based products. In short, the tables:

- Provide an overview of both SOFR-linked swap positions as of the end of Q2 as well as Q2 transaction activity.
- In certain cases, provides a high-level breakdown of who is trading and holding positions in SOFR-linked swaps

The summary of swap activity found in the tables is similar, but not equivalent, to that found in the other public reports. This is primarily because large trades, when reported in the public ticker, can often be “capped”, masking the full notional amount. Because the regulatory data provided to the CFTC is not capped, aggregate volumes seen in these tables are often higher than in the other summaries. As one example, SOFR swap activity in the 2Q was estimated to be around \$84bn across around 190 swaps reported on the public ticker. In the uncapped regulatory data, the volume of this activity rises to around \$170bn, indicating how binding the cap can be for this subset of swaps.

SOFR activity and positions are summarized separately in the two provided data tabs – with the “Transactions” tab representing the activity summaries and the “Open Interest” tab the position summaries. On each tab, tables for SOFR-based swaps are restricted to the left column and SOFR-futures are restricted to the right column. Swaps tables, in both tabs, include information on volumes/positions broken out by:

- Product type
- Cleared Status
- Tenor
- Month of Activity (Volume)

Futures tables, in both tabs, include information on volumes/positions broken out by:

- Contract
- Futures Expiration
- Month of Activity (Volume)
- Participant Type (Open Interest)

³ For more information on this SOFR-based cash and swap activity see [this article](#).

⁴ The 2Q 2019 report can be found [here](#).

A few high-level observations can be made:

- Activity in SOFR-based futures and swaps has generally been increasing quarter-on-quarter. In some cases, like swaps, this growth can be significant (on the order of hundreds of percent)
- This activity is still significantly lower than the equivalent Libor-based markets. As one example, current open interest in USD Libor-based swaps stands at almost \$100tn; this level is far higher than the just over \$100bn in SOFR open interest.
- Much of the activity is focused on short tenor instruments with, for instance, around 2/3rds of SOFR swap open interest falling in the 0-3m tenor bucket. This contrasts with the long-duration of other Libor-based instruments like mortgages and commercial lending.
- Activity is spread across a number of different participant types, with asset managers, intermediaries and leverage speculators each representing non-negligible proportions of SOFR-futures positions.

We plan on releasing this report on a quarterly basis, with ongoing commentary. Please send any questions or comments about the analysis to the corresponding authors.