LIBOR will not transition quietly: What you need to know now

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Entrenched in the markets since 1986, LIBOR is currently tied to approximately $400 trillion of financial contracts for derivatives, bonds, mortgages, and retail and commercial loans. Because of its huge embeddedness in the capital markets, the shift to alternative reference rates—also known as the risk-free rates (RFRs)—could very possibly be the greatest challenge facing financial institutions today.

Liang Wu, Numerix

Numerix's Liang Wu, Vice President, Financial Engineering, and Head of CrossAsset Product Management, discusses the scope of the transition, some of the characteristics of the RFRs, considerations for curve building and valuation modelling, liquidity issues, and the IT challenges associated with the transition.

How large an undertaking will it be for market participants to transition from LIBOR to the RFRs?

Liang Wu: For the past 30+ years, LIBOR has been used in so many financial contracts that it is arguably the most important number in finance today. And despite the announcement that the sustainment of LIBOR will end in 2021, there are still new LIBOR-based contracts being issued in the market with maturities beyond 2021. As you can imagine, it will be a huge effort for the industry to transfer from such a well-known rate to the RFRs.

It will involve the undertaking of very complicated tasks, such as contract renegotiations, the placement of fallback language in legacy contracts, new curve modelling, IT systems upgrades, and other requirements. It will take significant time and effort to perform these tasks.

With 2021 closing in, there is also an urgency for the build-up of sufficient liquidity for the RFRs market. We are just getting started in this regard, but there is a long way to go to help support a smooth transition.

What are some of the differing characteristics between the IBORS and the RFRs?

Liang Wu: The IBORs and RFRs are very different from each other. The IBORs are oftentimes term rates that cover many different tenors, while the RFRs are all overnight rates. In addition, IBORs are proxy rates for AA-rated credit risk, while RFRs have minimum credit risk. RFRs are also based on actual transactions, while the IBORs follow the "waterfall methodology", which uses eligible transaction data where available before resorting to expert judgment.

Even though the RFRs are intended to eventually replace IBORs, it is possible we will initially see a number of different benchmarks coexisting, such as the RFRs being used together with IBOR rates or other overnight rates, such as the Fed Funds rate, for the transition period.

The new RFRs need robust curves. How do market participants go about building curves when underlying derivatives and cash markets may still be relatively illiquid?

Liang Wu: Liquidity for RFR derivatives is improving but, overall, is still rather weak. The most progress has been made in the SONIA market. SONIA swaps have been trading for a couple of years now and SONIA futures have also been trading for a while and the number of contracts for both continue to increase, so liquidity there is good overall. Liquidity is not as good in the SOFR swaps market, which is still a very small market with just dozens of billions of dollars notional outstanding. The trading of SOFR futures, on the other hand, continues to grow in both the LCH and CME exchanges.

However, it largely remains the case that liquidity for the other RFRs—SARON and TONA—is lacking, and €STR is not scheduled for publication until early October of this year. But there are things market participants can do in terms of curve building for them. Let's use SOFR swaps as an example. We do not see good liquidity in SOFR swaps at the moment, but what market participants can do is adopt a multi-curve approach. The idea is you can prepare a Fed Funds curve using liquid Fed Fund-related instruments and then define your SOFR curve as a spread curve with respect to the Fed Fund curve. In this way, the low liquidity issue is addressed by extrapolating the short end spread to the longer time horizon. Once the liquidity of SOFR swaps picks up, we can then have more choices for curve instruments.

That said, liquidity is only one aspect when considering the building of robust RFR curves. What should also be reflected in the curve construction exercise is the ability to capture any potential jumps or drops in interest rates associated with central bank meeting dates, as well as being capable of handling the turn effect, which usually happens at the end of the month, quarter, or year based on supply and demand.

How does ISDA's fallback methodology impact contracts from a valuation perspective?

Liang Wu: It will bring in new valuation practices at the time of fallback triggering. For derivatives contracts in general, LIBOR projections and OIS discounting were previously already used in the valuation. When it comes to the new RFRs, replacing OIS discounting with RFR discounting is more or less straightforward, although you do need to have a robust RFR curve behind that.

In addition, let's say the ISDA fallback mechanism for a LIBOR rate is confirmed as being a combination of one of the proposed adjusted risk-free rate approaches and one of the proposed spread adjustment approaches. In that case, an immediate requirement in valuation would be to use this information in the forward LIBOR projection in the sudden discontinuation of the LIBOR rate. As a result, the forward-looking LIBOR fallback projection will consist of a projected adjusted RFR plus a spread.

Let's look at the euro markets. Do you think applying an EONIA spread to €STR will provide a stable platform to facilitate a smooth transition from EONIA to €STR?

Liang Wu: In my opinion, it will. The benefit should come in the form of a higher volume of €STR, because EONIA will be based more on actual transactions. Applying the spread to €STR would also provide the ability to leverage the existing EONIA derivatives market in the temporary transition period so that the market can continue supporting EONIA curve construction as well as the valuation based on it.

Will the multi-curve approach incorporating €STR and EURIBOR still be applicable once €STR is published?

Liang Wu: Yes. If Euribor reform succeeds, then the rate will not be discontinued at the end of the 2021 deadline. It is possible that the demand for the EURIBOR term rate will still be there. By following a multi-rate approach, people can still refer EURIBOR rates in various terms, while treating the €STR rate as the new overnight rate index.

How big an IT challenge does the transition to RFRs present to market participants?

Liang Wu: The IT challenge could be very significant. Becoming IT ready will be a large project that will be handled, for most firms, under the duress of resource limitations and tight timelines. The legacy systems in use today likely have hard-coded curve instruments that were specifically designed only for LIBOR and/or the OIS rate. These cannot be used for the RFRs and it is very likely these systems do not have the flexibility to evolve along with this pending market change.

Curve stripping will certainly become more challenging as key reference rates move from LIBOR to the RFRs. This means the introduction of new curve instruments based on the RFRs, in addition to new functionalities that will need to be implemented into existing instruments. So, it will be essential to have the technology that can accommodate new curve member instruments. There is no going around this.

From a high-level viewpoint, there are four core capabilities that any new technology will need to accommodate:

- On the trade definition side, the newly introduced RFR contracts should be able to be defined and recognized in an analytics library, and the legacy contracts valuation should be able to be conducted if fallback is triggered in the event of LIBOR's sudden discontinuation.
- On the curve side, there should be a multi-curve framework that can easily connect with the existing LIBOR and OIS curves; various curve features should be available or integrated into the updated system. These include:
  - Solving globally multiple curves simultaneously, and for different currencies.
  - Accommodating central bank meeting dates by being able to capture any associated potential jumps or drops in interest rates
  - Capable of handling the "turn effect", which usually happens at the end of the month, quarter, or year based on supply and demand.
  - Should allow curves to be defined as spread curves, meaning one curve is defined via spread with respect to another curve.
  - Should allow different interpolation methods to be used for different segments of the same curve.
- The valuation module should be upgraded to be able to perform valuation on the new types of RFR contracts as well as on legacy contracts in the case of the discontinuation of LIBOR.
- On the risk management side, exposure calculation, CVA (credit valuation adjustment) and VaR (Value at Risk) modules should all be upgraded to accommodate new RFRs-based trades.

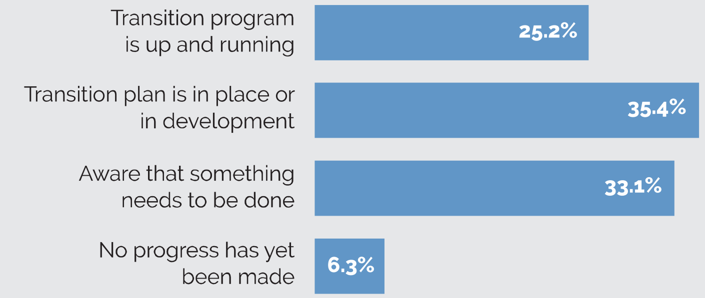
What is your primary message to firms regarding the transition journey?

Liang Wu: The time to start planning for the transition is now. Conduct your LIBOR exposure analysis to get an idea of how much you may be impacted by the transition, review the fallback language for current contracts and determine the robustness of the language as well as how the language can be amended to incorporate the latest fallback language proposed by ISDA and/or working groups. Additionally, begin the communications process in both internal and external settings. Internally, create awareness of your firm's LIBOR transition plan and generate consensus among key stakeholders. Externally, prepare a client outreach strategy and collect inputs from customers, partners and regulators.

Market participants should also recognize that the transition from LIBOR to RFRs could present significant difficulties in certain markets and products that are currently linked to LIBOR. Planning earlier rather than later could help establish a smoother transition.

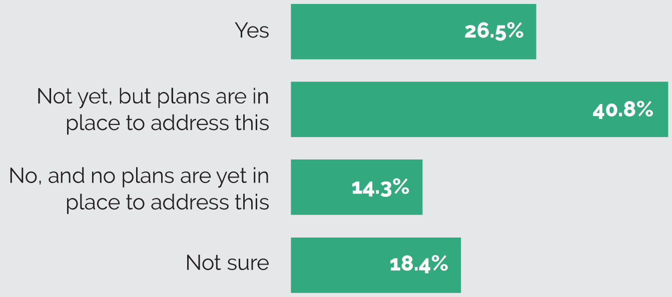
In a Risk.net webinar held on March 22, 2019, participants were asked three poll questions related to their LIBOR transition progress. These are their responses.

How far along is your firm in preparing for the changeover from LIBOR to the RFRs?



Is your institution actively trading LIBOR alternative rate-linked products?

Is your institution's current technology system able to handle the functionality required for alternative reference rates curve construction?



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